When Pigs Shall Fly- Game Rules

1-10 players* | 30-60 minutes | Ages 8 and up | Designed by Mark Fuhrman | Art by Andrew Kutz

Just before the days of aviation, human flight was a rumor- a whisper in the wind. Somewhere, someone was aiming for the clouds. Hoping to take advantage of these rumors and boost its image, your city is planning a contest: build a flying machine, and find someone foolish enough to fly it.

Now, you know a publicity stunt when you hear one, but the idea has intrigued you. You may be a humble farmer, but you have assets that others may not- a working knowledge of mechanics, determination, a hard work ethic, and… animals. Lots of animals. A grin slowly spreads on your face. "When pigs shall fly, they say," you mutter to yourself. "Well then, let's take to the skies!"

When Pigs Shall Fly is a game in which players prepare for the city's flight contest by researching the importance of the various theories of flight, designing a flying craft, training a pig to pilot their craft, and improving their craft's materials to make it as light as possible. Along the way, they must also try to generate publicity and utilize the other farm animals to help them in their quest for aviation greatness. When the big day arrives, players will have a chance to see the fruits of their labor by flying their craft in the contest, and hopefully, become locally known as the farmer with their head in the clouds!

**For single player mode, see Appendix*

Components

A. Player Sheets (front and back)- 1 per player
B. Block Tokens- 1 per player
C. Pencil (or Pen or Marker)- 1 per player
D. Straight Edge or Ruler- 1 per player *(ideally, although they could be shared)*
E. Community Board- 1 total
F. Flight Theory Cards- 4 total
G. Six-sided dice- 1 per player, plus 1 more *(i.e.4 dice in a 3-player game)*
H. Lead Player Token- 1 total

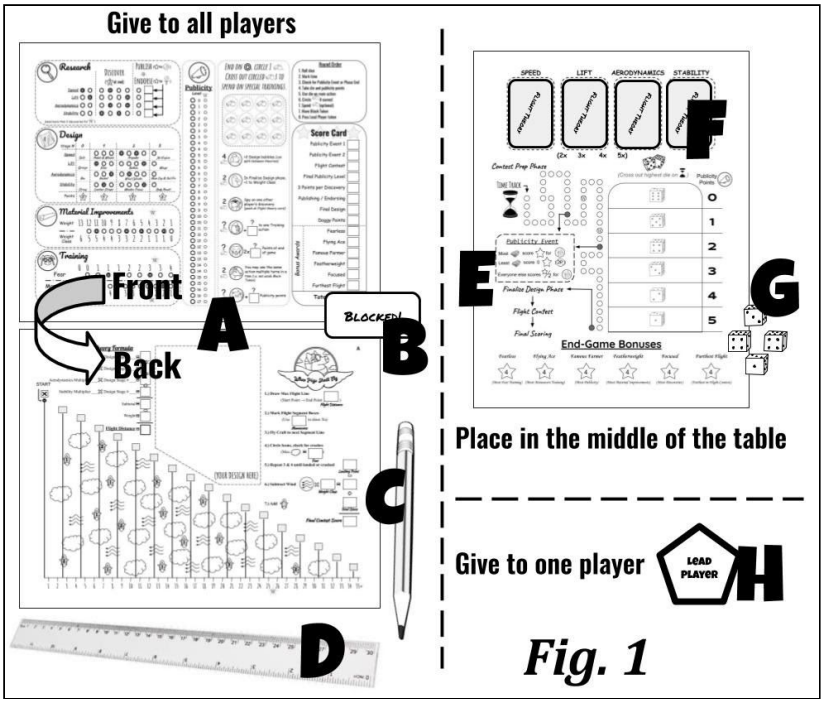


Fig. 1

Setup

To set up the game, give each player a Player Sheet*, a Block Token, a Ruler, and something to write with. Next, lay the Community Board out on the table so all players can see. Shuffle the flight theory cards and randomly place one face down on each flight theory spot on the Community Board. Place the dice (known as "action dice") next to the board. Lastly, give the Lead Player Token to the player who last saw a pig that was in the air. This player will start the game as Lead Player (and should probably tell the story about that pig).

*Player sheets have a letter in the top right-hand corner of the back- A, B, C, or D. There are no differences between these player sheets other than the arrangements of the icons for the flight contest. If players wish to vary their experience from game to game, they may decide to hand these out contest-side-down, at random, so they do not know which one they got.

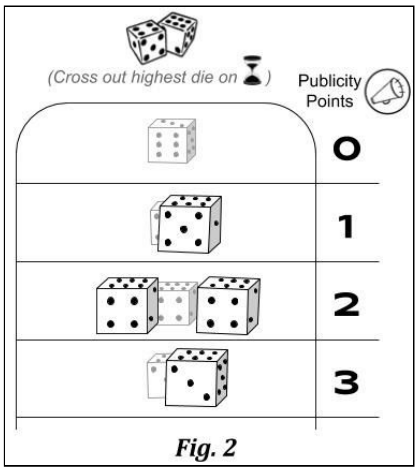


Fig. 2

Gameplay

I. Contest Prep Phase

The majority of the game is played in the Contest Prep Phase, which takes place over a series of rounds. Each round goes as follows:

A. Roll Dice- The Lead Player takes all of the action dice and rolls them. In the event that all of the die values are the same, they are re-rolled. The Lead Player then places those dice onto the dice ladder located on the Community Board, based on each die's value *(see Fig. 2)*.

B. Mark off Time- The Lead Player crosses off a number of bubbles on the time track equal to the value of highest die. The bubbles that they cross off must follow the line of bubbles from beginning to end, without skipping any *(see Fig. 3).*

C. Check for Publicity Event or Phase End- If one of the bubbles just crossed off was a grey bubble, it triggers a publicity event (first or second grey bubble) or the end of the Contest Prep phase (third grey bubble) *(see Fig. 3)*. If a grey bubble was not crossed off, move on to the next step (Take Action Dice).

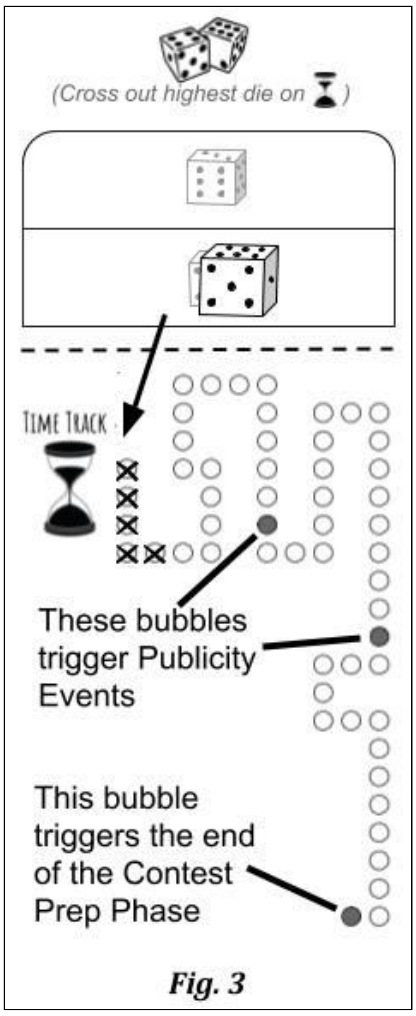
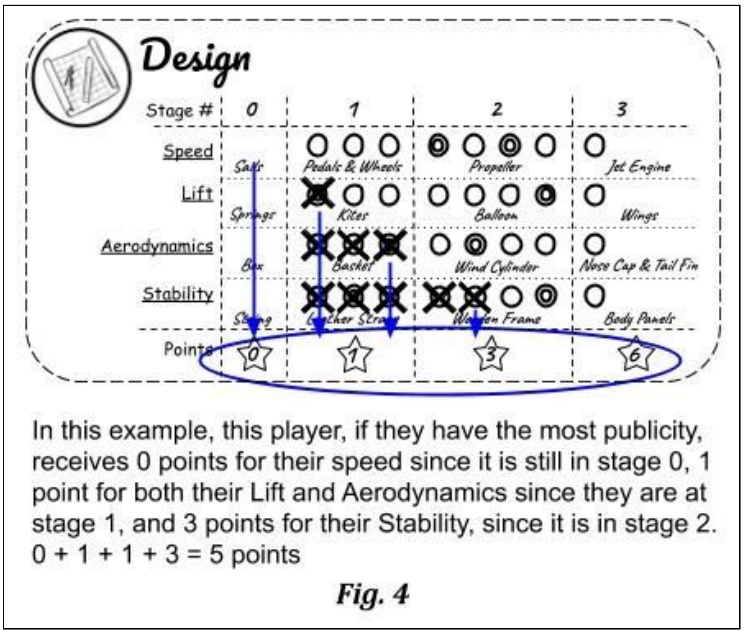


Fig. 3

- Publicity Event- When one of these events are triggered, the round is paused.
  - Each player checks their publicity track. Whoever has the most publicity scores full points for their current design stages by checking the star below that stage *(see Fig. 4).* Whoever has the least publicity scores zero points for their current design levels. Everyone else scores half points for their current design levels, rounded down.
    - In the case of ties, all tied players are grouped as the same status, i.e. most or least or in the middle. *For example, in a three-player game, if one player had 15 bubbles crossed off on their publicity track, and two players had 9 bubbles crossed off, the first player would get full points, and both of the other players would score zero points- there would be no one in the middle in this case.*
    - In a 2-player game, each player will either score full points or half, not zero.
  - After the scores are recorded on each player's Score Card (located on their player sheet) for that Publicity Event, play resumes with the Take Action Dice step.
- End of the Contest Prep Phase- When the last grey bubble is crossed off, this will be the last round of the Contest Prep Phase. Flip the Lead Player Token over as a reminder, and continue

play with the Take Action Dice step. At the end of this round, proceed to the Finalize Design Phase.

D. Take Action Dice- Starting with the Lead Player and proceeding clockwise around the table, each player takes one of the action dice from the ladder. Additionally, each player receives a number of publicity points equal to the value next to the die they took (to the right of the dice ladder), NOT the die value itself. The players cross off the indicated number of Publicity bubbles on their Player Sheet *(see Fig. 5)*. Then, the die value they chose becomes the number of action points they can spend this round.



In this example, this player, if they have the most publicity, receives 0 points for their speed since it is still in stage 0, 1 point for both their Lift and Aerodynamics since they are at stage 1, and 3 points for their Stability, since it is in stage 2. 0 + 1 + 1 + 3 = 5 points

Fig. 4

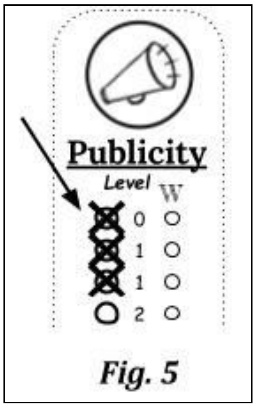


Fig. 5

E. Assign Action Points- Players now use the action points they received from their die by crossing off that many bubbles in one of the four main actions on their Player Sheet, with the following restrictions:

- Players must use the value on a single horizontal line of bubbles. They may, if desired, waste part of the value if all the bubbles in that line are crossed off, but they may never split the value between two separate lines..
- Players cannot choose a line from an action they performed the previous round, as indicated by their Block Token.
- Players must start at the left-most available bubble, and cross off from left to right. *Players do not need to have completed lines above the ones they chose; each horizontal line is independent of the others.*

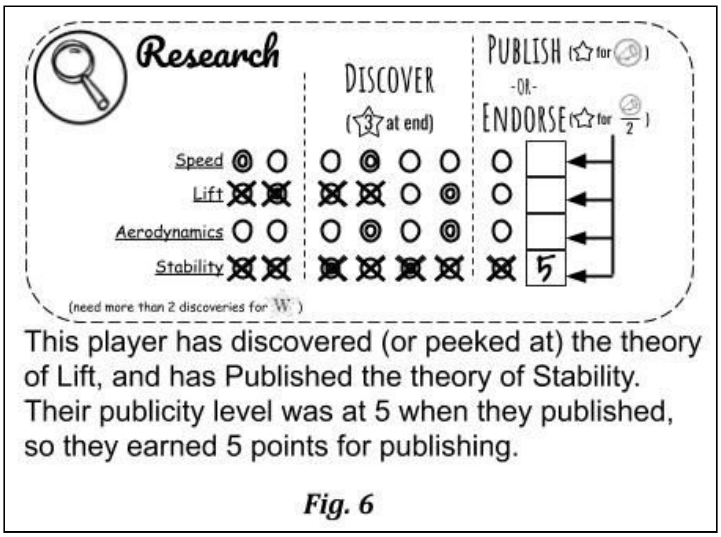
The Four Main Actions

Research

Spending action points on the Research action will allow a player to gain more information about the Flight Formula. There are four theories (or aspects) of the formula- Speed, Lift, Aerodynamics, and Stability. Each game, the relative importance of these theories will change based on the random placement of the theory cards. Researching these theories will not only score a player points at the end of the game, but can also help inform their decisions about which particular designs are worth pursuing during the game.

If a player ever crosses off a bubble in the "Discovery" section, they may peek at that particular Flight Theory Card on the Community Board without showing other players. For every theory they have "discovered" at the end of the game, they will earn three points.

Each Theory Card will have a multiplier on it. In order to help players remember which multiplier they just discovered, they can write that multiplier on the back of their player sheet, in the Flight Formula section. This also serves to keep their findings secret from other players.



This player has discovered (or peeked at) the theory of Lift, and has Published the theory of Stability. Their publicity level was at 5 when they published, so they earned 5 points for publishing.

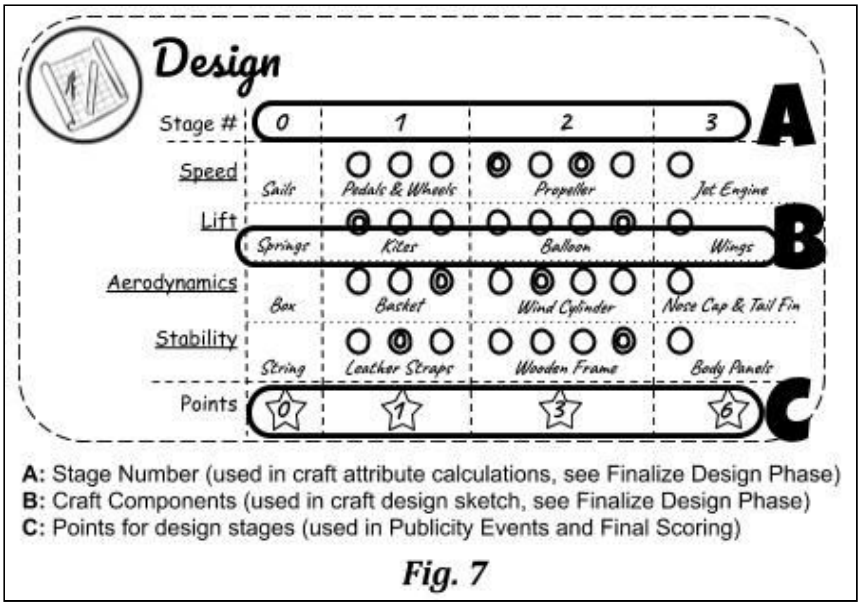
Fig. 6

In addition, if players choose, they can go *past* the discovery section and cross off the bubble in the "Publish or Endorse" section. The first player to do so for a particular theory "Publishes" that theory- they flip that theory card over on the community board so that all players can see it for the rest of the game. Also, they score points for that published discovery- that player writes their current publicity level down in the publishing score box for that theory.

If a theory has already been published, other players may instead "Endorse" the theory by crossing off that same bubble. Endorsing allows a player to score points just like publishing, except that they only score <u>half</u> of their publicity level, rounded down.

Design

Spending action points on the Design action will improve a player's mechanical design, so that when the contest arrives, the player has a craft better suited for flight. Each theory has an associated set of parts with increasing efficiency and point value based on how much the player invested in that design. However, maximizing the design in any one theory will only do so well, depending on if that theory was actually important in the first place (see Research)…



A: Stage Number (used in craft attribute calculations, see Finalize Design Phase)
B: Craft Components (used in craft design sketch, see Finalize Design Phase)
C: Points for design stages (used in Publicity Events and Final Scoring)

Fig. 7

As players cross off bubbles in the design section, they unlock better stages for the theory they were investing in. The more advanced the stage, the farther your craft will fly during the flight contest.

Furthermore, the design stages of each theory will score you points at different times in the game- stage zero designs do not score any points, but stage one scores one point, stage two scores three, and stage three scores six. These are totaled and scored for all four theories at publicity events and at the end of the game.

Material Improvements

Spending action points on material improvements allows a player to reduce the weight of their craft's final design. This not only allows it to fly further overall, but also reduces the negative effect that any unfavorable winds have.

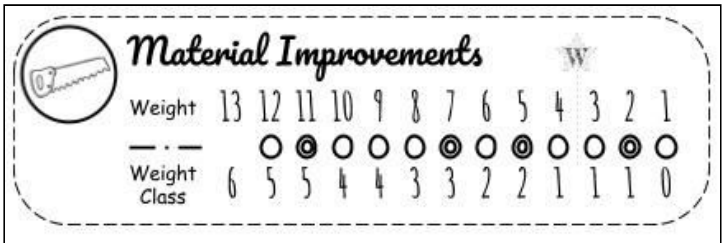


Fig. 8

The number of bubbles crossed off on the material improvements track determines two characteristics of a player's craft. When play gets to the Finalize Design Phase, the number *above* the last crossed off bubble is a craft's <u>weight</u>. The number *below* is the craft's weight <u>class</u>.

Flight Training

Spending action points on flight training allows a player to invest in their pig's piloting abilities. Even the most expertly-designed crafts will crash with a poor pilot at the helm. Pigs not only need bravery to remain calm when flying through clouds, but also practice controlling and steering their craft.

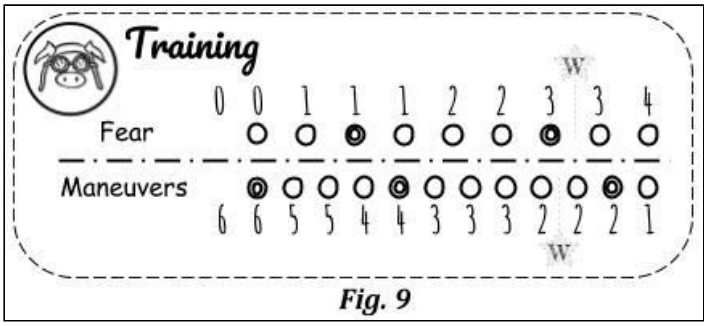


Fig. 9

Investing in a pig's fear training will help the pig fly through a greater number of clouds, based on the number above your last crossed off bubble. During the flight contest, if a player flies through more clouds than their pig's fear training allowed for, their craft will crash to the ground.

The more maneuvers bubbles that are crossed off, a player's pig gains greater flexibility in drawing a flight path during the flight contest. The number below the last crossed off bubble will be how many lines you must connect with a single flight segment. The fewer lines connected, the better your pig will be able to steer around clouds and winds or through hoops.

F. Receive Special Training Points- Every round in which the last bubble a player crosses off is a "target" bubble, they earn one Special Training Point, indicated by a whistle icon. Circle one of the available whistles in the Special Training area.

G. Spend Special Training Points- If a player would like, they now have the option to spend any number of circled whistles to train one or more of the other animals on the farm. These animals are listed on the Player Sheets, with their cost in whistles. To train them, a player simply crosses out the required number of circled whistles and circles that animal *(see Fig. 10)*. *If an animal has already been circled, a player cannot train it again.*

- Sheep- When a player trains their sheep, they immediately cross off two Design bubbles. These may be in the same theory, or two different theories, but they must be the leftmost available in their respective lines. These extra bubbles are NOT eligible to earn the player any additional whistles.
- Duck- If a player has trained their duck, when they get to the Finalize Design Phase and are transferring their weight class to the Flight Contest, they may subtract one from their weight class value.
- Rat- When a player trains their rat, once per game, they may "spy" on another player's research by peeking at one theory card that player has already discovered. *A player who spies on a discovery will* not *get points for that discovery at the end of the game, unless they later go on to cross off those bubbles on their own player sheet.*

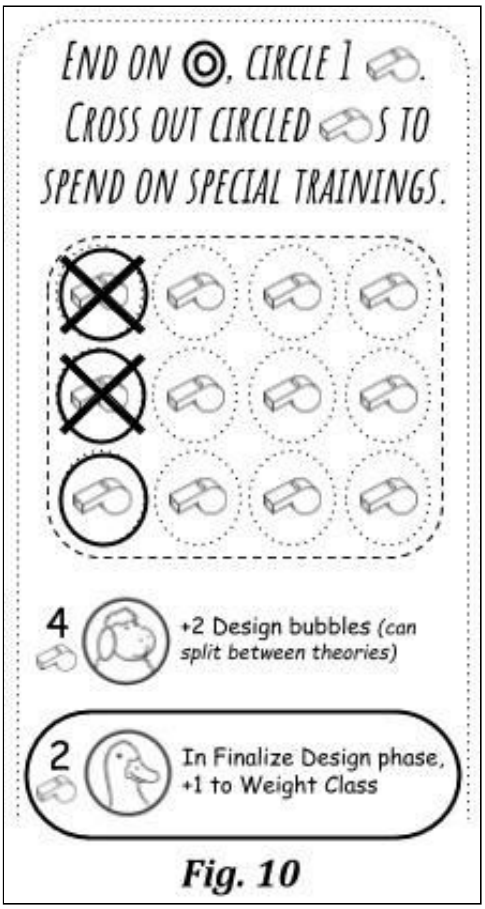
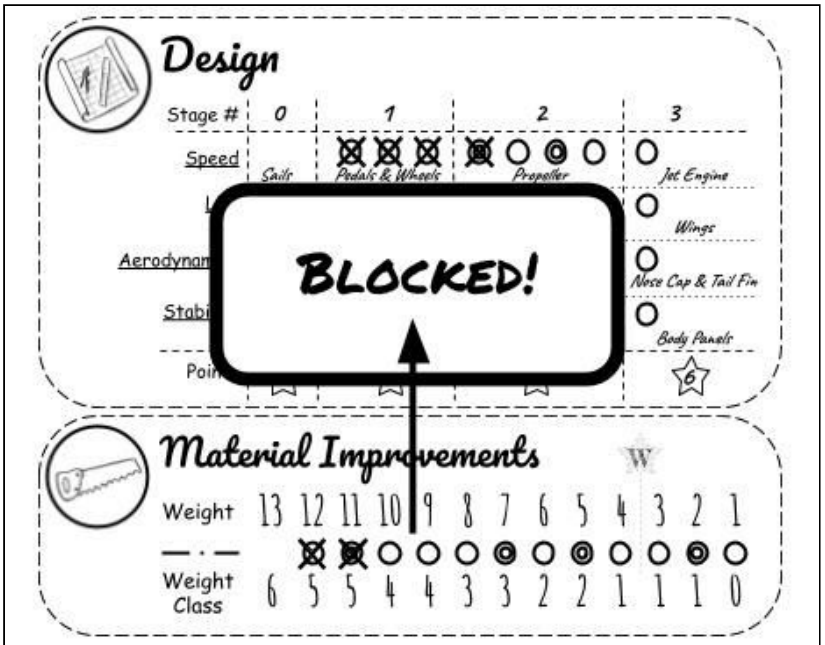


Fig. 10

- Chicken- A player can spend any number of whistles to train the chicken. When they do, they write the number they spent in the box next to the chicken. Any time they use a training action (fear or maneuvers), they can choose to add this number to that training action. If they do, they must cross out the chicken to show that the number has been used. *This number will be added to their action die's value, so they can potentially earn another whistle in this manner.*
- Dog- A player can spend any number of whistles to train the dog. When they do, they write the number they spent in the box next to the dog. At the end of the game, they will receive two times that number of points when tallying their final score.
- Horse- A player who trains the horse may remove their "block token" from their Player Sheet. For the rest of the Contest Prep Phase, they are no longer restricted by it, and are able to repeat the same action each turn if they desire.
- Cat- A player can spend any number of whistles to train the cat. When they do, they write the number they spent in the box next to the cat, and immediately receives that number of publicity points.

H. Move Block Tokens- After a player finishes crossing off bubbles with their action points, they move their block token to the main action section they selected for this round; this action will be unavailable for the next round *(see Fig. 11)*.

I. Round End- After all players have taken their turn for this round, the current Lead Player passes the Lead Player Token to their left, and the next round is ready to begin with the Roll Dice step.



This player had taken a Materials Improvement action the previous round, but now chooses to invest in the Design for Speed. After they do so, they slide their Block Token over the Design action to show they can't use it next round.

Fig. 11

II. Finalize Design Phase

After the last round of the Contest Prep Phase, play moves into the Finalize Design Phase, which translates each player's previous efforts into a tangible craft, ready to fly *(see Fig. 12 and 13 for examples)*. *For these steps, and for the rest of the game, there are no turns- each player can play simultaneously with the others, though it is recommended that players wait for each other before starting each subsequent step.*

1. Reveal Flight Theories- Whichever player was the Lead Player for the last round flips each flight theory card face-up on the Community Board over (unless it had previously been flipped up). Then, each player records these numbers (called multipliers) in the Flight Theory Formula section on the back of their Player Sheet
2. Calculate Craft Attributes -
    a. Design Stage- The design stage each player unlocked for each theory is recorded in the formula.

b. Weight- Their craft's weight (found in the material improvements section) is recorded in the formula.
c. Flight Distance- Using the formula, players calculate their flight distance (making sure that the weight is subtracted, not added). Record this number in the Flight Distance box on the back of the Player Sheet.
d. Weight Class- Each player's weight class is recorded on the back of the Player Sheet.
e. Fear- Each player's fear level is recorded on the back of the Player Sheet.
f. Maneuvers- Each player's maneuverability is recorded on the back of the Player Sheet.

3. Sketch Craft Design- Players may now draw a sketch of what they envision their craft looks like on the back of their Player Sheet, using their current design's components (listed next to each stage). *This step of the game is optional, but highly recommended as "mental preparation" for the contest.*

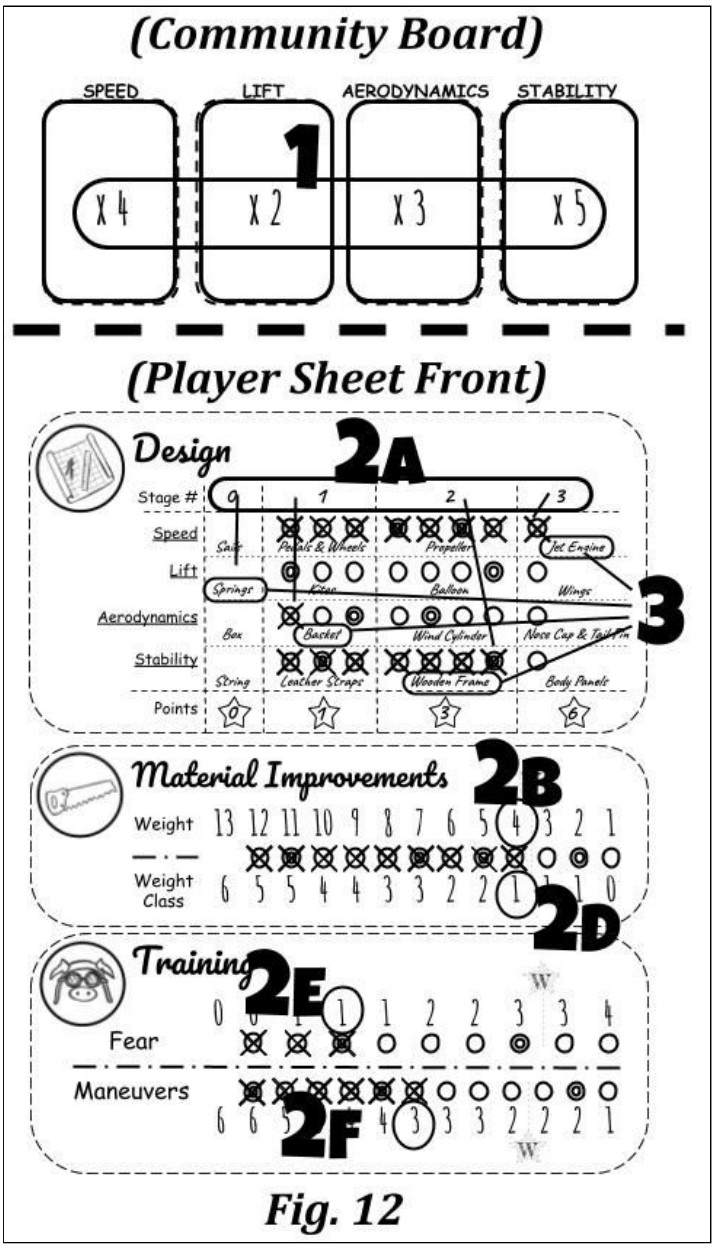


Fig. 12

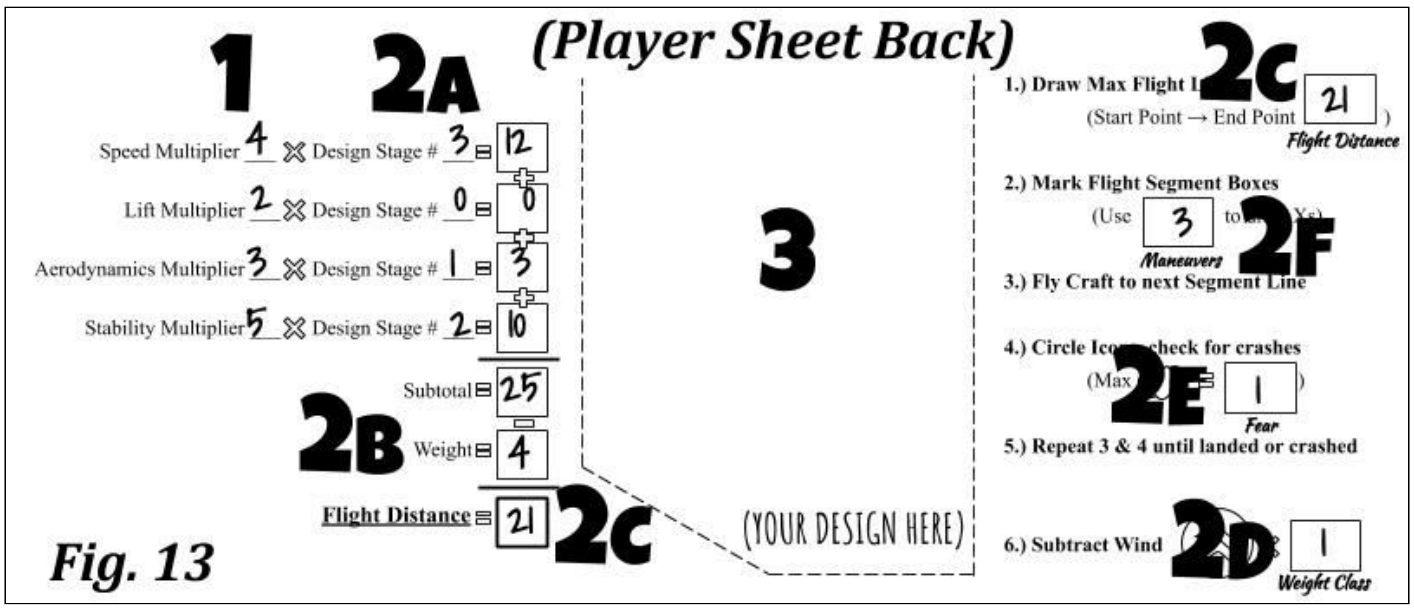


Fig. 13

III. Flight Contest

After every player's designs are finalized, it is time to test them (and their pilots!) in the Flight Contest (located on the back of the Player Sheet)*(see Fig. 14 for an example)*.

1. Draw the Max Flight Line- Each player takes a ruler or straight-edge and draws a-line connecting the starting point (at the top left of the contest grid) to their end point located on the bottom of the contest grid. The end point is the number equal to their flight distance. This is known as their "Max Flight" line. During flight, their pilot may never go above or past this line. *Players may find it helpful to make this a dotted line in order to avoid confusion.*
2. Mark Flight Segment Boxes- On the contest grid, in the boxes above the vertical lines, players now mark an "X" every certain number of boxes equal to their maneuverability, starting from the left and not including the starting line. *For instance, if a player has a maneuverability of 3, they would have an X over the 3rd line, the 6th line, the 9th line, etc.* These lines are known as the "segment end" lines.
3. Fly Craft to Next Segment End Line- Using a straight-edge, each player now draws a line connecting the starting point of the contest to the closest segment end line, adjusting the angle up or down as much as they like, as long as it is below their max flight line.
4. Circle Clouds, Winds, and Hoops, and Check for Crashes- Each player now circles any clouds, wind gust symbols, or star hoops that the line they just drew passed through (or even touched). The wind gusts and hoops will come into play later, but for now, players count the number of clouds they have circled up to this point. As long as the total number of all circled clouds does not exceed their pig's fear level, that player will continue flying. If, however, a player has circled more clouds than their fear level, that player must draw a line from the end of the last cloud they circled straight down to the ground. This pig has crashed.
5. Repeat steps 3 and 4- Assuming a player has not crashed or landed by connecting their line to the ground, they may then draw another flight line in a similar manner, connecting where their flight line is currently to the next segment end line. Players continue to draw new flight segments and circling clouds, wind gusts, and hoops after each until they crash or their line connects to the ground.

   In the case that their flight segment would extend past the point where their Max Flight Line connects to the ground, the player MUST instead draw their line connecting to that Max Flight Line end point.
6. Subtract Wind Gusts- From the point at which each player has either landed or crashed, players now adjust for wind. To do this, they multiply the number of wind gusts they circled by their weight class, and subtract that from their landing point.
7. Add VP Hoops to total- Players total the value of all the star hoops they flew through and add that to their landing point. After subtracting wind and adding stars, the total is written in the Final Contest Score box. This is the number of points the player earned in the contest, and can be written on the Score Card section of the front of the Player Sheet..

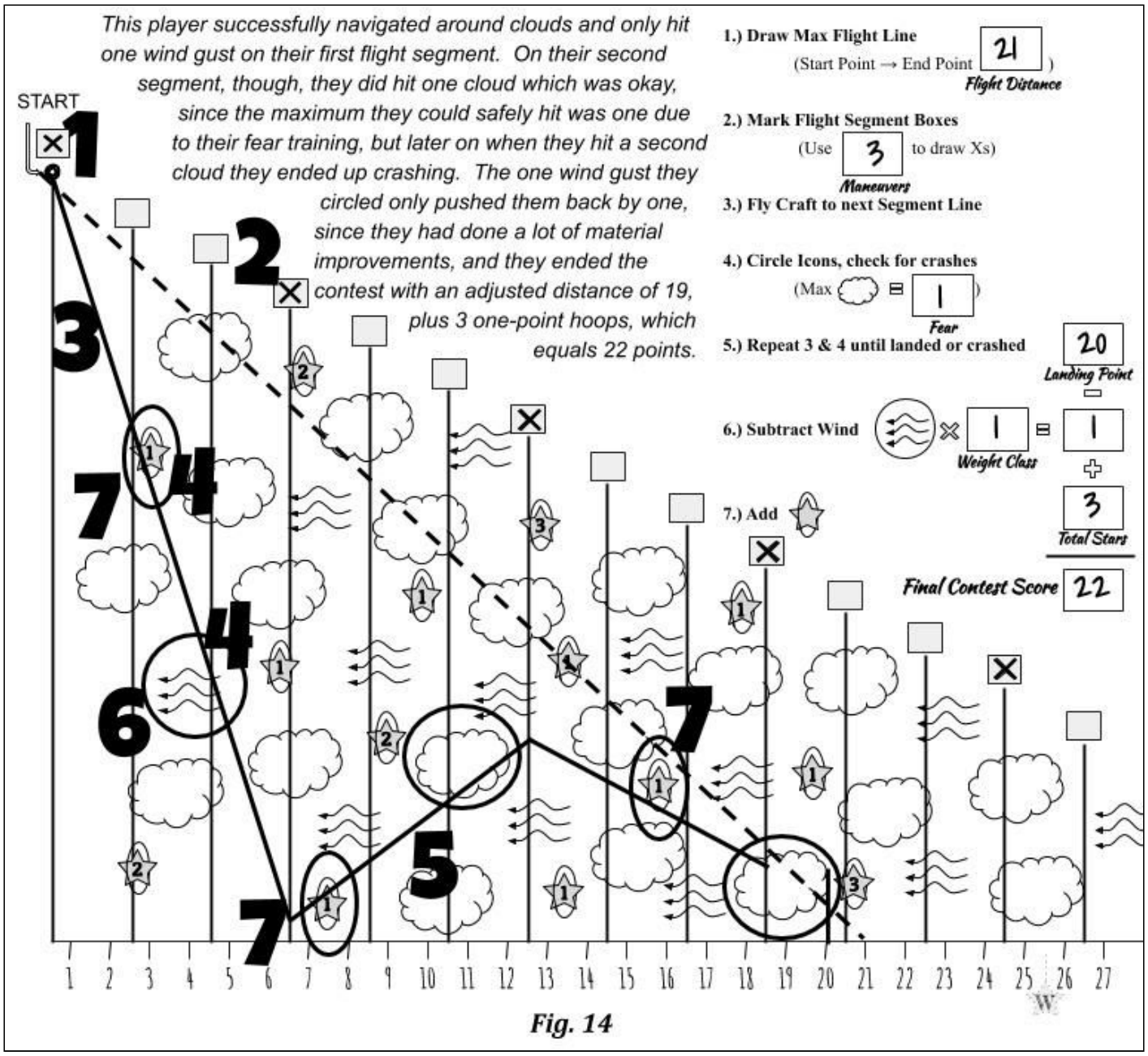


Fig. 14

IV. Final Scoring

Once every player has finished the Flight Contest, players record and add up all the points they earned throughout the game on their Score Card. In detail:

- Publicity Events- Each time one of the grey bubbles is crossed off, a Publicity Event is scored. These should already be filled in- *see Publicity Events in the Contest Prep Phase for details*.
- Points from Flight Contest- Each player receives a number of points equal to their Final Contest Score from the Flight Contest.
- Final Publicity Level- Each player receives a number of points equal to their final publicity level.
- Publishing- If a player ever published (or endorsed) for one or more theories, they total those points (found in the research area of the Player Sheet) and record the result here.
- Discoveries- For each theory that a player crossed off a bubble in the discovery section, they receive three points. They still receive the points even if they later went on to publish or endorse that theory.

- Final Design- Similar to the way Publicity Events are scored, all players now receive points for their final design stages, with the difference that now *all* players receive the *full* number of points, no matter their publicity level.
- Doggy Points- If a player trained the dog during the contest prep phase, they receive a number of points equal to the number they wrote in the box next to the dog multiplied by two.
- Bonus Awards- All players check the community board to see if they receive any of the Bonus Awards listed there. If they do, they record them on their score card. In case of a tie for any particular bonus award, both players receive the full amount of points.
    - Famous Farmer- Player with the most publicity
    - Flying Ace- Player who did the most training in maneuvers
    - Fearless- Player who did the most training in fear levels
    - Featherweight- Player who made the most Material Improvements
    - Focused- Player who made the most discoveries
    - Furthest Flight- Player who made it the farthest in the flight contest. *I.e. the player with the highest contest score.*
- Total Points- Add together all the points from the scoring chart. This is the player's final score.

V. Game End

When all the player's scores have been calculated, the game has ended. The player with the most points is declared to be the winner. In the case of a tie, the rest of the players may vote on who drew the best design during the Finalize Design Phase, or the tied players can share the victory.

VI. Appendix- Solo Play

A solo game of *When Pigs Shall Fly* is played just like a normal 2-player game, except the player will mostly be playing to better their own score. Any actions that need other players now have an artificial player, known as "Wilbur", to help out. Anywhere a player sees this symbol: W, Wilbur is involved.

1. The player will start as Lead Player for round one, but will alternate with Wilbur being Lead Player every other round.
    a. When the player is the Lead Player, they roll, arrange the dice, mark off time, and pick their die first as usual. Then, Wilbur selects the next die with the highest available value.
    b. When Wilbur is the Lead Player, the player rolls, arranges the dice, marks off time, and then Wilbur first selects the die with the lowest available value.
2. Whenever Wilbur selects a die, the die value itself does nothing, but Wilbur does receive the Publicity Points for that die. Players can mark off Wilbur's publicity next to their own publicity on their Player Sheet *(see fig. 15)*. This is what they will compare to when there is a Publicity Event, or at the end of the game for the Famous Farmer bonus.
3. If a player ever marks off a W on the time track, they do the following:
    a. If it is the first W, the player rolls a die.
        i. If the value rolled is 1-4, Wilbur has just made a discovery. The player can draw a "W" and circle it next to that theory on their Player Sheet: 1- Speed, 2- Lift, 3- Aerodynamics, 4- Stability. *(see fig. 16)*
        ii. If the value rolled is a 5-6, nothing happens.

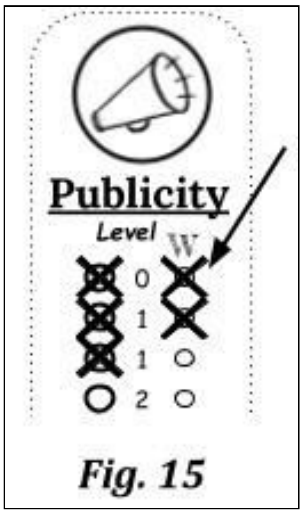


Fig. 15

b. If it is the second W, AND Wilbur did not make a discovery on the first W, Wilbur now Publishes a theory. Roll a die until it is a 1-4, and flip over the corresponding Flight Theory card: 1- Speed, 2- Lift, 3- Aerodynamics, 4- Stability.
c. In this manner, players may use the Rat on Wilbur, if he has made a discovery, or may later gain some information from his Publishings.

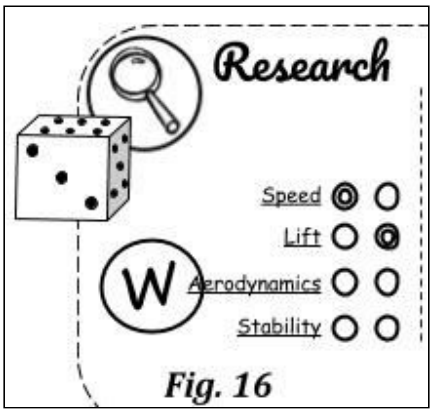


Fig. 16

4. At the end of the game, to determine the Bonus Awards:
a. For Famous Farmer- players can check their publicity against Wilbur's to determine if they receive this award.
b. For Focused- if players made more than two discoveries, they receive this award.
c. For all other Bonus Awards- players will receive the other bonuses if they have passed Wilbur's line, which is already marked on their Player Sheet *(see Fig. 17, and Fig. 9 for an example)*

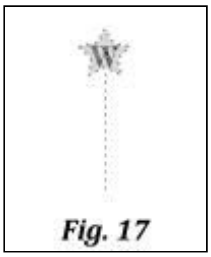


Fig. 17

When the game has finished, players can check their scores against the following to see how they did:

0-39 points: Crash and Burn
40-54 points: Afraid of Heights
55-69 points: Getting the "Hang" of it
70-79 points: Cruising at High Altitude
80-89 points: Born to Fly
90+ points: Master of the Skies

When Pigs Shall Fly by Mark Fuhrman is licensed under CC BY-NC-ND 4.0. To view a copy of this license, visit https://creativecommons.org/licenses/by-nc-nd/4.0

Research

DISCOVER (3 at end)

PUBLISH (☆ for 📣)

-OR-

ENDORSE (☆ for 📣/2)

Speed	◎	○	○	◎	○	○	○	☐
Lift	○	◎	○	○	○	○	◎	☐
Aerodynamics	○	○	○	◎	○	○	◎	☐
Stability	○	○	◎	○	◎	○	○	☐

(need more than 2 discoveries for W)

Design

Stage #	0	1	2	3
Speed	Sails	Pedals & Wheels	Propeller	Jet Engine
Lift	Springs	Kites	Balloon	Wings
Aerodynamics	Box	Basket	Wind Cylinder	Nose Cap & Tail Fin
Stability	String	Leather Straps	Wooden Frame	Body Panels
Points	0	1	3	6

Material Improvements

Weight	13	12	11	10	9	8	7	6	5	4	W	3	2	1
	○	◎	○	○	○	◎	○	◎	○	○		◎	◎	○
Weight Class	6	5	5	4	4	3	3	2	2	1		1	1	0

Training

	0	0	1	1	1	2	2	3	W	3	4
Fear	○	○	○	◎	○	○	○	◎		○	○
Maneuvers	◎	○	○	○	◎	○	○	○	○	◎	○
	6	6	5	5	4	4	3	3	3	2	2	W	2	1

Publicity

Level	W
0	○
1	○
1	○
2	○
2	○
3	○
3	○
4	○
4	○
5	○
5	○
6	○
6	○
7	○
7	○
8	○
8	○
9	○
9	○
10	○
10	○
11	○
11	○
12	○
12	○
13	○
13	○
14	○
14	○
15	○
15	○
16	○
16	○
17	○

END ON ◎, CIRCLE 1 🎺. CROSS OUT CIRCLED 🎺S TO SPEND ON SPECIAL TRAININGS.

- 4 🎺 — +2 Design bubbles *(can split between theories)*
- 2 🎺 — In Finalize Design phase, -1 to Weight Class
- 2 🎺 — Spy on one other player's discovery *(peek at flight theory card)*
- ? 🎺 — ? + ☐ to one Training action
- ? 🎺 — 2x ? ☐ Points at end of game
- 2 🎺 — You may use the same action multiple turns in a row *(i.e. set aside Block Token)*
- ? 🎺 — ? + ☐ Publicity points

Round Order

1. Roll dice
2. Mark off time
3. Check for Publicity Event or Phase End
4. Take die and publicity points
5. Use die on main action
6. Circle 🎺 if earned
7. Spend 🎺 (optional)
8. Move Block Token
9. Pass Lead Player token

Score Card

Publicity Event 1	☐
Publicity Event 2	☐
Flight Contest	☐
Final Publicity Level	☐
3 Points per Discovery	☐
Publishing / Endorsing	☐
Final Design	☐
Doggy Points	☐
Bonus Awards	
Fearless	☐
Flying Ace	☐
Famous Farmer	☐
Featherweight	☐
Focused	☐
Furthest Flight	☐
Total Points	☐

A

Flight Theory Formula

Speed Multiplier ___ ⊠ Design Stage # ___ ⊟

Lift Multiplier ___ ⊠ Design Stage # ___ ⊟

Aerodynamics Multiplier ___ ⊠ Design Stage # ___ ⊟

Stability Multiplier ___ ⊠ Design Stage # ___ ⊟

Subtotal ⊟

Weight ⊟

Flight Distance ⊟

START

(YOUR DESIGN HERE)

When Pigs Shall Fly

1.) Draw Max Flight Line

(Start Point → End Point ☐)

Flight Distance

2.) Mark Flight Segment Boxes

(Use ☐ to draw Xs)

Maneuvers

3.) Fly Craft to next Segment Line

4.) Circle Icons, check for crashes

(Max ☁ ⊟ ☐)

Fear

5.) Repeat 3 & 4 until landed or crashed

Landing Point

6.) Subtract Wind ≋ ⊠ ☐ ⊟ ☐

Weight Class

7.) Add ★ ✚ ☐

Total Stars

Final Contest Score ☐

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35+

W

Research

DISCOVER (3 at end)

PUBLISH (☆ for 📣)

-OR-

ENDORSE (☆ for 📣/2)

Speed	◎	○	○	◎	○	○	○	☐
Lift	○	◎	○	○	○	○	◎	☐
Aerodynamics	○	○	○	◎	○	○	◎	☐
Stability	○	○	◎	○	◎	○	○	☐

(need more than 2 discoveries for W)

Design

Stage #	0	1	2	3
Speed	Sails	Pedals & Wheels	Propeller	Jet Engine
Lift	Springs	Kites	Balloon	Wings
Aerodynamics	Box	Basket	Wind Cylinder	Nose Cap & Tail Fin
Stability	String	Leather Straps	Wooden Frame	Body Panels
Points	0	1	3	6

Material Improvements

Weight	13	12	11	10	9	8	7	6	5	4	W	3	2	1
	○	◎	○	○	○	◎	○	◎	○	○		◎	◎	○
Weight Class	6	5	5	4	4	3	3	2	2	1		1	1	0

Training

	0	0	1	1	1	2	2	3	W	3	4
Fear	○	○	○	◎	○	○	○	◎		○	○
Maneuvers	◎	○	○	○	◎	○	○	○	○	◎	○
	6	6	5	5	4	4	3	3	3	2	2	W	2	1

Publicity

Level	W
0	○
1	○
1	○
2	○
2	○
3	○
3	○
4	○
4	○
5	○
5	○
6	○
6	○
7	○
7	○
8	○
8	○
9	○
9	○
10	○
10	○
11	○
11	○
12	○
12	○
13	○
13	○
14	○
14	○
15	○
15	○
16	○
16	○
17	○

END ON ◎, CIRCLE 1 🎺. CROSS OUT CIRCLED 🎺S TO SPEND ON SPECIAL TRAININGS.

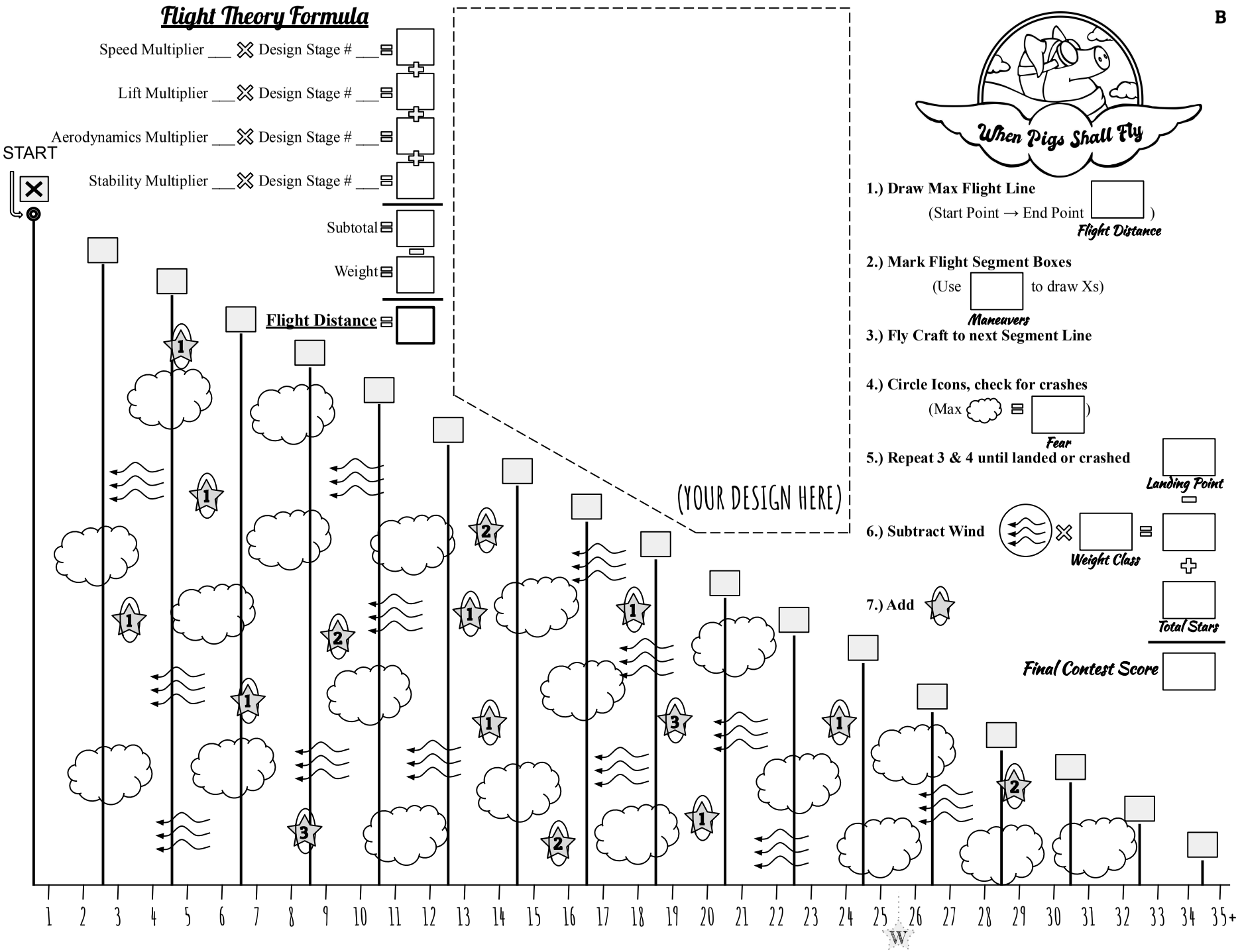
- 4 🎺 — +2 Design bubbles *(can split between theories)*
- 2 🎺 — In Finalize Design phase, -1 to Weight Class
- 2 🎺 — Spy on one other player's discovery *(peek at flight theory card)*
- ? 🎺 — ? + ☐ to one Training action
- ? 🎺 — 2x ? ☐ Points at end of game
- 2 🎺 — You may use the same action multiple turns in a row *(i.e. set aside Block Token)*
- ? 🎺 — ? + ☐ Publicity points

Round Order

1. Roll dice
2. Mark off time
3. Check for Publicity Event or Phase End
4. Take die and publicity points
5. Use die on main action
6. Circle 🎺 if earned
7. Spend 🎺 (optional)
8. Move Block Token
9. Pass Lead Player token

Score Card

Publicity Event 1	☐
Publicity Event 2	☐
Flight Contest	☐
Final Publicity Level	☐
3 Points per Discovery	☐
Publishing / Endorsing	☐
Final Design	☐
Doggy Points	☐
Bonus Awards	
Fearless	☐
Flying Ace	☐
Famous Farmer	☐
Featherweight	☐
Focused	☐
Furthest Flight	☐
Total Points	☐


Flight Theory Formula
Speed Multiplier ___ Design Stage # ___
Lift Multiplier ___ Design Stage # ___
Aerodynamics Multiplier ___ Design Stage # ___
Stability Multiplier ___ Design Stage # ___
Subtotal
Weight
Flight Distance
START
(YOUR DESIGN HERE)
B
When Pigs Shall Fly
1.) Draw Max Flight Line
(Start Point → End Point)
Flight Distance
2.) Mark Flight Segment Boxes
(Use to draw Xs)
Maneuvers
3.) Fly Craft to next Segment Line
4.) Circle Icons, check for crashes
(Max)
Fear
5.) Repeat 3 & 4 until landed or crashed
Landing Point
6.) Subtract Wind
Weight Class
7.) Add
Total Stars
Final Contest Score
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35+
W

Research

DISCOVER (3 at end)

PUBLISH (☆ for 📣)

-OR-

ENDORSE (☆ for 📣/2)

Speed	◎	○	○	◎	○	○	○	☐
Lift	○	◎	○	○	○	○	◎	☐
Aerodynamics	○	○	○	◎	○	○	◎	☐
Stability	○	○	◎	○	◎	○	○	☐

(need more than 2 discoveries for W)

Design

Stage #	0	1	2	3
Speed	Sails	Pedals & Wheels	Propeller	Jet Engine
Lift	Springs	Kites	Balloon	Wings
Aerodynamics	Box	Basket	Wind Cylinder	Nose Cap & Tail Fin
Stability	String	Leather Straps	Wooden Frame	Body Panels
Points	0	1	3	6

Material Improvements

Weight	13	12	11	10	9	8	7	6	5	4	W	3	2	1
	○	◎	○	○	○	◎	○	◎	○	○		◎	◎	○
Weight Class	6	5	5	4	4	3	3	2	2	1		1	1	0

Training

	0	0	1	1	1	2	2	3	W	3	4
Fear	○	○	○	◎	○	○	○	◎		○	○
Maneuvers	◎	○	○	○	◎	○	○	○	○	◎	○
	6	6	5	5	4	4	3	3	3	2	2	W	2	1

Publicity

Level	W
0	○
1	○
1	○
2	○
2	○
3	○
3	○
4	○
4	○
5	○
5	○
6	○
6	○
7	○
7	○
8	○
8	○
9	○
9	○
10	○
10	○
11	○
11	○
12	○
12	○
13	○
13	○
14	○
14	○
15	○
15	○
16	○
16	○
17	○

END ON ◎, CIRCLE 1 🎺. CROSS OUT CIRCLED 🎺S TO SPEND ON SPECIAL TRAININGS.

- 4 🎺 — +2 Design bubbles *(can split between theories)*
- 2 🎺 — In Finalize Design phase, -1 to Weight Class
- 2 🎺 — Spy on one other player's discovery *(peek at flight theory card)*
- ? 🎺 — ? + ☐ to one Training action
- ? 🎺 — 2x ? ☐ Points at end of game
- 2 🎺 — You may use the same action multiple turns in a row *(i.e. set aside Block Token)*
- ? 🎺 — ? + ☐ Publicity points

Round Order

1. Roll dice
2. Mark off time
3. Check for Publicity Event or Phase End
4. Take die and publicity points
5. Use die on main action
6. Circle 🎺 if earned
7. Spend 🎺 (optional)
8. Move Block Token
9. Pass Lead Player token

Score Card

Publicity Event 1	☐
Publicity Event 2	☐
Flight Contest	☐
Final Publicity Level	☐
3 Points per Discovery	☐
Publishing / Endorsing	☐
Final Design	☐
Doggy Points	☐
Bonus Awards	
Fearless	☐
Flying Ace	☐
Famous Farmer	☐
Featherweight	☐
Focused	☐
Furthest Flight	☐
Total Points	☐

C

Flight Theory Formula

Speed Multiplier ___ ⊠ Design Stage # ___ =

Lift Multiplier ___ ⊠ Design Stage # ___ =

Aerodynamics Multiplier ___ ⊠ Design Stage # ___ =

Stability Multiplier ___ ⊠ Design Stage # ___ =

Subtotal =

Weight =

Flight Distance =

START

(YOUR DESIGN HERE)

When Pigs Shall Fly

1.) Draw Max Flight Line

(Start Point → End Point ☐)

Flight Distance

2.) Mark Flight Segment Boxes

(Use ☐ to draw Xs)

Maneuvers

3.) Fly Craft to next Segment Line

4.) Circle Icons, check for crashes

(Max ☁ = ☐)

Fear

5.) Repeat 3 & 4 until landed or crashed

Landing Point

6.) Subtract Wind ⊠ ☐ = ☐

Weight Class

7.) Add ☆ + ☐

Total Stars

Final Contest Score ☐

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35+

W

Research

DISCOVER (3 at end)

PUBLISH (☆ for 📣)

-OR-

ENDORSE (☆ for 📣/2)

Speed	◎	○	○	◎	○	○	○	☐
Lift	○	◎	○	○	○	○	◎	☐
Aerodynamics	○	○	○	◎	○	○	◎	☐
Stability	○	○	◎	○	◎	○	○	☐

(need more than 2 discoveries for W)

Design

Stage #	0	1	2	3
Speed	Sails	Pedals & Wheels	Propeller	Jet Engine
Lift	Springs	Kites	Balloon	Wings
Aerodynamics	Box	Basket	Wind Cylinder	Nose Cap & Tail Fin
Stability	String	Leather Straps	Wooden Frame	Body Panels
Points	0	1	3	6

Material Improvements

Weight	13	12	11	10	9	8	7	6	5	4	W	3	2	1
	○	◎	○	○	○	◎	○	◎	○	○		◎	◎	○
Weight Class	6	5	5	4	4	3	3	2	2	1		1	1	0

Training

	0	0	1	1	1	2	2	3	W	3	4
Fear	○	○	○	◎	○	○	○	◎		○	○
Maneuvers	◎	○	○	○	◎	○	○	○	○	◎	○
	6	6	5	5	4	4	3	3	3	2	2	W	2	1

Publicity

Level	W
0	○
1	○
1	○
2	○
2	○
3	○
3	○
4	○
4	○
5	○
5	○
6	○
6	○
7	○
7	○
8	○
8	○
9	○
9	○
10	○
10	○
11	○
11	○
12	○
12	○
13	○
13	○
14	○
14	○
15	○
15	○
16	○
16	○
17	○

END ON ◎, CIRCLE 1 🎺. CROSS OUT CIRCLED 🎺S TO SPEND ON SPECIAL TRAININGS.

- 4 🎺 — +2 Design bubbles *(can split between theories)*
- 2 🎺 — In Finalize Design phase, -1 to Weight Class
- 2 🎺 — Spy on one other player's discovery *(peek at flight theory card)*
- ? 🎺 — ? + ☐ to one Training action
- ? 🎺 — 2x ? ☐ Points at end of game
- 2 🎺 — You may use the same action multiple turns in a row *(i.e. set aside Block Token)*
- ? 🎺 — ? + ☐ Publicity points

Round Order

1. Roll dice
2. Mark off time
3. Check for Publicity Event or Phase End
4. Take die and publicity points
5. Use die on main action
6. Circle 🎺 if earned
7. Spend 🎺 (optional)
8. Move Block Token
9. Pass Lead Player token

Score Card

Publicity Event 1	☐
Publicity Event 2	☐
Flight Contest	☐
Final Publicity Level	☐
3 Points per Discovery	☐
Publishing / Endorsing	☐
Final Design	☐
Doggy Points	☐
Bonus Awards	
Fearless	☐
Flying Ace	☐
Famous Farmer	☐
Featherweight	☐
Focused	☐
Furthest Flight	☐
Total Points	☐

Flight Theory Formula

Speed Multiplier ___ ⊠ Design Stage # ___ =

Lift Multiplier ___ ⊠ Design Stage # ___ =

Aerodynamics Multiplier ___ ⊠ Design Stage # ___ =

Stability Multiplier ___ ⊠ Design Stage # ___ =

Subtotal =

Weight =

Flight Distance =

D

When Pigs Shall Fly

START

(YOUR DESIGN HERE)

1.) Draw Max Flight Line

(Start Point → End Point ☐)

Flight Distance

2.) Mark Flight Segment Boxes

(Use ☐ to draw Xs)

Maneuvers

3.) Fly Craft to next Segment Line

4.) Circle Icons, check for crashes

(Max ☁ = ☐)

Fear

5.) Repeat 3 & 4 until landed or crashed

Landing Point

6.) Subtract Wind ≋ ⊠ ☐ = ☐

Weight Class

7.) Add ★ + ☐

Total Stars

Final Contest Score ☐

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35+

W

SPEED | LIFT | AERODYNAMICS | STABILITY

FLIGHT THEORY | FLIGHT THEORY | FLIGHT THEORY | FLIGHT THEORY

(2x 3x 4x 5x)

Contest Prep Phase

TIME TRACK

(Cross out highest die on)

Publicity Points

	0
	1
	2
	3
	4
	5

Publicity Event

Most score for

Least score 0 (2P)

Everyone else scores ½ for

Finalize Design Phase

Flight Contest

Final Scoring

End-Game Bonuses

Fearless	*Flying Ace*	*Famous Farmer*	*Featherweight*	*Focused*	*Furthest Flight*
4	4	4	4	4	4
(Most Fear Training)	*(Most Maneuvers Training)*	*(Most Publicity)*	*(Most Material Improvements)*	*(Most Discoveries)*	*(Farthest in Flight Contest)*

(End of Contest Prep Phase)

Flight Theory

Flight Theory

Flight Theory

Flight Theory

x 2

x 3

x 4

x 5

Blocked!

Blocked!

Blocked!

Blocked!

Blocked!

Lead Player