

# Entomology 101

A RANDOM-WRITE GAME  
BY MIKE HEIMAN, 2020



A CASUAL GAME FOR INSECT ENTHUSIASTS OF ALL AGES.

## GAMEPLAY

ENTOMOLOGY IS A GAME FOR 2-6 PLAYERS CONSISTING OF 20 ROUNDS AND LESS THAN 30 MINUTES OF PLAY PER GAME.

ENTOMOLOGY SIMULATES A 20-WEEK UNIVERSITY SEMESTER FROM THE PERSPECTIVE OF STUDENTS MAJORING IN THIS FIELD OF SCIENCE. ACCURATELY DETAILED ILLUSTRATIONS OF INSECTS AND A REALISTIC SYLLABUS WILL IMMERSIVE THE PLAYERS THROUGH A SEMESTER OF COLLEGE AS THEY COMPETE TO COLLECT THE MOST STAR POINTS.

## COMPONENTS NEEDED

--2 TO 6 PAGES (PLAYER COUNT) OF ROLL/WRITE SHEETS PRINTED IN COLOR.



-- EACH SHEET SHOULD BE LAMINATED OR PUT INTO A CLEAR-FILMED PAGE PROTECTOR.

--1 RED SIX-SIDE DIE

--1 WHITE SIX-SIDED DIE

--A DRY ERASE MARKER FOR EACH PLAYER

## OBJECT OF GAME

THE PLAYER WITH THE MOST STAR POINTS AFTER 20 ROUNDS (WEEKS) WINS. THE STARS AT THE TOP OF THE PLAYER SHEET RECORD YOUR PROGRESS. IN CASE OF A TIE, THE WINNER IS THE PERSON WHO MARKED THE MOST STARS  AND COCOONS  ON THE ACTIVITIES CHART.

## SETUP

YOU, AND EVERY OTHER PLAYER, RECEIVES A MARKER AND A LAMINATED PLAYER SHEET. EACH SHEET IS BASED ON A DIFFERENT INSECT TYPE; BEES, BEETLES, BUTTERFLIES, DRAGONFLIES, MOTHS, OR WASPS. SIDE A OF THE PLAYER SHEETS (RED PAPERCLIP IN LOWER LEFT) HAVE THE SAME DICE-GRID COORDINATE COMBINATIONS. SIDE B (BLUE PAPERCLIP) HAS DIFFERENT DICE-COORDINATE COMBINATIONS FOR EACH PLAYER. AS A GROUP, DECIDE TO PLAY EITHER SIDE A OR SIDE B.

## GAMEPLAY

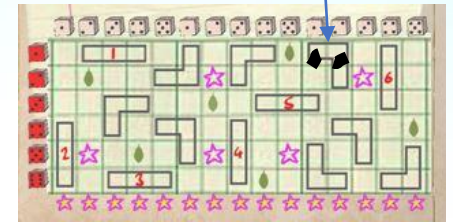
### PHASE 1: ROLL DICE

ROLL THE TWO DICE (ANY PLAYER). ALL PLAYERS USE THE RESULTS TO FILL IN BOXES ON THE ACTIVITIES CHART. THE WHITE DIE REFERS TO THE X AXIS AND THE RED DIE REFERS TO THE Y AXIS AT THE BOTTOM LEFT OF THE PLAYER SHEET.

THE X AXIS HAS THREE OPTIONS FOR ANY RESULT (THREE 1s, THREE 2s, ETC.)

### PHASE 2: MARK THE ACTIVITIES CHART

USE THE DIE RESULTS TO MARK A BOX ON THE CHART AT THE GIVEN COORDINATE WITH YOUR DRY ERASE MARKER. THEN MARK ONE ADJACENT BOX AS WELL. ADJACENT IS NOT DIAGONAL.



A 6 ON THE WHITE DIE IS WILD. IF A 6 IS ROLLED ON THE WHITE DIE, EACH PLAYER GETS TO CHOOSE THE WHITE DIE'S VALUE INDIVIDUALLY (BUT NOT THE RED DIE'S).

IF YOU MARK A STAR BOX ON THE ACTIVITIES CHART, IMMEDIATELY MARK A STAR AT THE TOP OF YOUR SHEET.

IF YOU MARK ALL 6 BOXES IN A VERTICAL COLUMN, YOU GAIN A STAR AS WELL.

### PHASE 3: MARK TASKS OR PIN COLLECTION

IF YOU FINISHED MARKING ALL PARTS OF A STRAIGHT 3-UNIT TETRONIMO, CIRCLE THE INSECT OF THE CORRESPONDING NUMBER WHILE READING ITS NAME ALOUD.



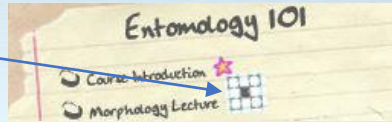
IF YOU FINISHED AN ANGLED 3-UNIT TETRONIMO, MARK A BUBBLE ON THE TASK SHEET. THESE BUBBLES AND TASKS MUST BE COMPLETED IN ORDER FROM TOP (COURSE INTRODUCTION) TO BOTTOM (FIELD WORK) AND CANNOT BE SKIPPED.

### PHASE 4: TASK COMPLETION AND COLLECTION BONUSES

EACH TASK GRANTS YOU A BONUS WHEN COMPLETING IT (MARKING THE BUBBLE):

THREE OF THE TASKS GIVE A STAR.

FOUR TASKS ALLOW YOU TO MARK A BOX DIAGONAL TO ANY ALREADY MARKED BOX (WHICH MAY TRIGGER A COMBINATION ALLOWING YOU GAIN MORE STARS OR BONUSSES).



"GROUP STUDY" ALLOWS THE PLAYER TO CHOOSE THE NEXT ROUND'S DIE NUMBERS WITHOUT ALLOWING ANYBODY TO ROLL THE DICE. IF MULTIPLE GAIN THIS BONUS AT THE SAME TIME, THE PLAYER WITH THE LEAST AMOUNT OF STAR POINTS CHOOSES.

"FIELD WORK" ALLOWS YOU TO IMMEDIATELY GAIN A STAR  FOR EACH COCOON  MARKED ON THE ACTIVITIES CHART.



THERE ARE SIX BONUSES ASSOCIATED WITH THE PINNED COLLECTION PAGE: A HORIZONTAL PAIR OF CIRCLED INSECTS GIVES THE PLAYER THREE STAR

POINTS, WHILE A VERTICAL COLUMN OF THREE CIRCLED INSECTS ALLOWS THE PLAYER TO IMMEDIATELY MARK THE NEXT TASK (WHICH MAY TRIGGER A COMBINATION OF MULTIPLE STARS OR ACTIONS).



### PHASE 5: ADVANCE THE WEEK

EVERY PLAYER MARKS ONE WEEK FROM THE TIMER AT THE BOTTOM OF THE SHEET. GO BACK TO PHASE 1, AND REPEAT THE PHASES UNTIL THE TWENTIETH ROUND IS COMPLETED.



### END OF GAME

WHEN THE LAST TIMER (IN PURPLE) IS MARKED, THE GAME PROCEEDS TO THE "FINAL EXAM" BEFORE ENDING. EVERY PLAYER COUNTS THEIR LARGEST CONTIGUOUS AREA OF MARKED ACTIVITY BOXES AND THE PLAYER WITH THE MOST BOXES MARKED GETS FOUR ADDITIONAL STAR POINTS. THE PLAYER WITH THE SECOND-HIGHEST NUMBER GETS ONE STAR POINT.

A CONTIGUOUS AREA IS A GROUP OF BOXES CONNECTED ADJACENTLY, NOT DIAGONALLY.

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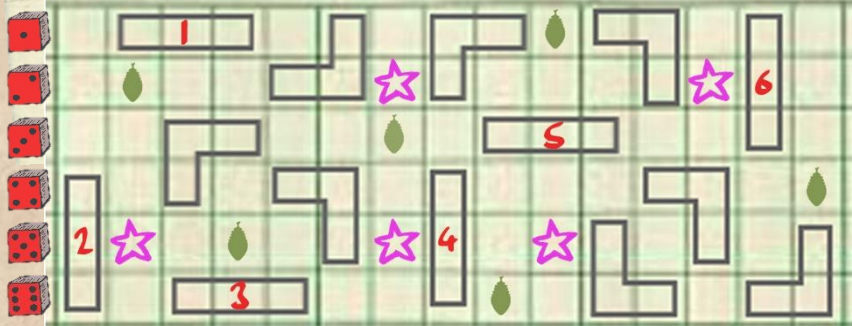
Mike Heiman is a public science teacher and game designer.

Scientific illustrations collected, modified, and color-adjusted from *Aid To The Identification Of Insects* by Charles Owen Waterhouse, 1880-1882.



# Entomology 101

- Course Introduction ★
- Morphology Lecture
- Article Review ★
- Anatomy Lecture
- Dissection Lab ★
- Ecology Lecture
- Group Study - Set dice to any numbers you want next turn.
- Genetics Lecture
- Field Work - Gain 1 ★ for each marked (6 possible).



## Pinned Collection



1 - Mason Bee



2 - Common Carder Bee



3 - American Bumblebee



4 - Western Honeybee - Queen



5 - Cuckoo Bumblebee



6 - Peacock Carpenter Bee



Final Exam




Player with most contiguous filled in boxes gets ★★★★★

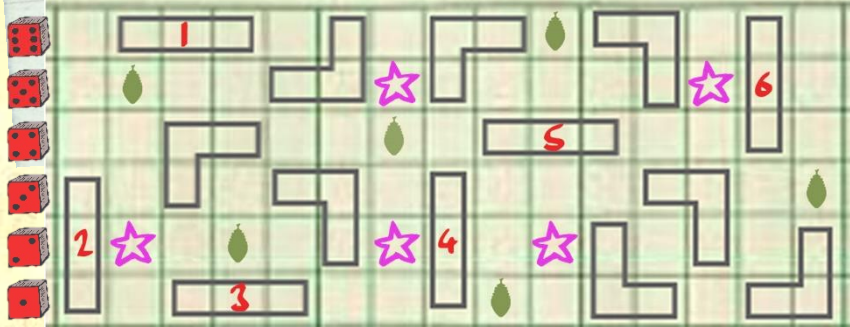
Second most gets ★





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# Pinned Collection



1 - 9-Spotted Ladybug



2 - Ground Beetle



3 - Jewel Beetle



4 - Bombardier Beetle



5 - Dung Scarab



6 - Stag Beetle



⊙ Final Exam  
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 Second most gets ★



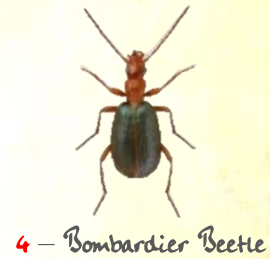


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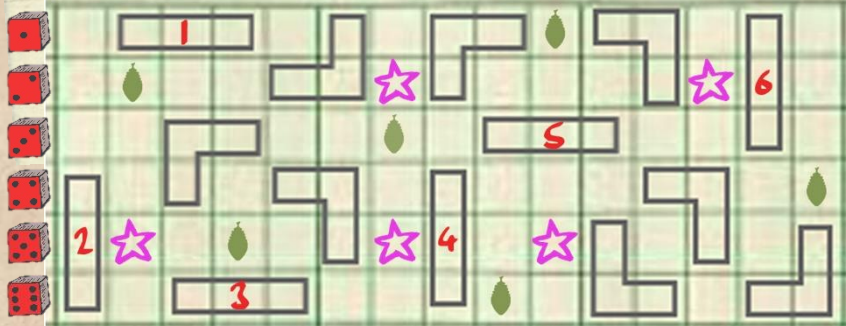
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# Pinned Collection



1 - Red Rim



2 - Monarch



3 - Crowded Hairstreak



4 - Purple Emperor



6 - Blue Morpho



5 - Clauded Sulphur






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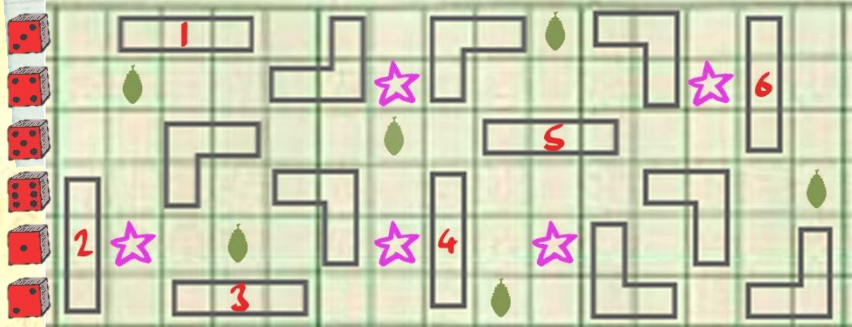
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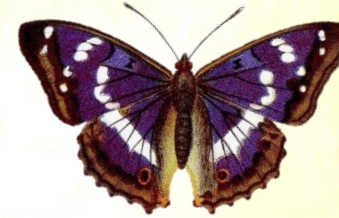
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15 dice icons above a 10x10 grid. The grid contains numbers 1-6, stars, and leaf icons. A path of stars and leaves is visible.



## Pinned Collection



1 - Blue-eyed Darner



2 - Halloween Pennant



3 - Filigree Skimmer



4 - Flame Skimmer




5 - S-striped Leaftail

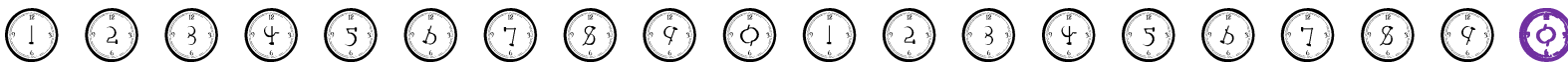


6 - Eastern Pondhawk








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15 dice icons above a 10x10 grid. The grid contains a maze with numbers 1-6, stars, and green leaf icons. The numbers are placed in the following cells: (1,2)=1, (2,8)=6, (3,5)=5, (4,1)=2, (4,3)=3, (4,6)=4, (5,4)=4.



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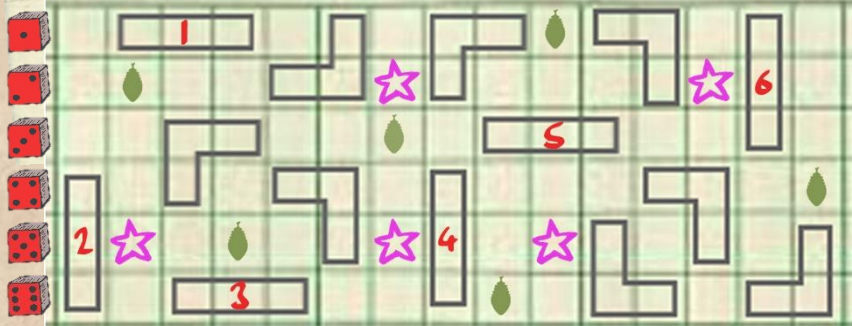
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# Pinned Collection



1 - Rosy Maple



2 - Northern Silk



4 - Cinnabar



3 - White Witch



5 - Death's Head



6 - Polyphomos



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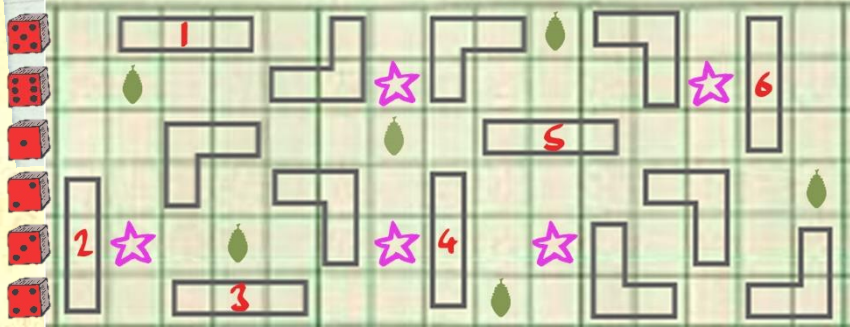
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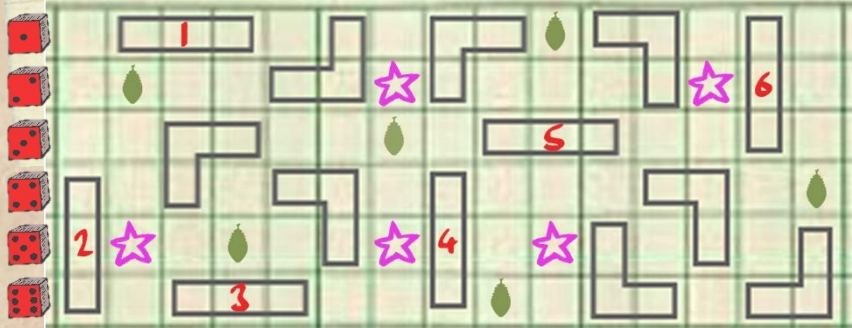
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# Pinned Collection



1 - Mud Dauber



2 - Asian Giant



3 - Red Velvet Ant



4 - Horntail




5 - European Hornet



6 - Yellow Jacket








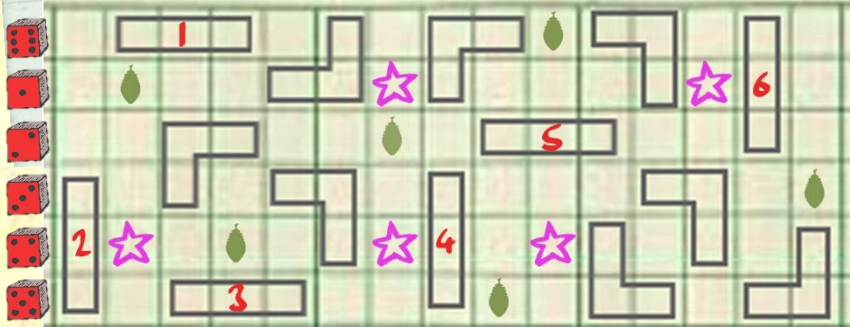
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