ASTROEDU

Peer-reviewed Astronomy Education Activities

# Snakes & Ladders Game

## Learn astronomical topics through the classic snakes and ladders game.

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### AGE

6 - 16

### LEVEL

Primary, Middle School

### TIME

30min

### GROUP

Group

### SUPERVISED

No

### COST PER STUDENT

Medium Cost

### LOCATION

Does not matter

### CORE SKILLS

Asking questions, Communicating information

### TYPE(S) OF LEARNING ACTIVITY

Game-mediated learning, Fun activity

## KEYWORDS

Game, Astronomy

## SUMMARY

## GOALS

- To introduce basic astronomical objects and vocabulary.
- To encourage creative engagement through storytelling and presentation.

## LEARNING OBJECTIVES

- Students will be able to memorise some astronomical objects and vocabulary.
- To improve the counting skills, listening and storytelling.

## EVALUATION

- Ask students to name the objects they encountered while playing the game.
- Discuss the characteristics of the objects with students.
- Assign each student one object to find out more about, for younger students this could be three facts about it: location, size, colour etc.

## MATERIALS

- Game board
- Dice and token model
- Scissors
- Glue

## BACKGROUND INFORMATION

Please refer to the “Objects list” document for information on each of the astronomical objects featured on the game board.

## FULL ACTIVITY DESCRIPTION

**This game is available in two sizes; A4 (attachment 1) for a group of 4-6 students and 3 meter x 3 meter (attachment 2) for larger groups, preferably a classroom.**


**Preparation:**

### Step1

Print the game board (in your preferred size).

### Step2

Cut the astronaut token and create one for each player.

## Step3

Cut off the dice from the board, fold it into a cube and glue in the white area.

Note: The larger game board should be printed in poster materials and use a big dice to play with.

**Game instructions:**

The teacher as a storyteller starts the game by describing the students that they will explore the Universe by traveling through space. Encourage students to memorise the objects they encounter along the way, so at the end of the game they will be able to share their journey with others.

Students playing on the A4-size game board will use the astronaut tokens. Those playing on the giant game board will travel through the Universe without any tokens.

## Step1

Students place their astronaut tokens in front of the space marked “1” or on the start box.

## Step2

The next step is to decide who plays first. Typically the youngest goes first, and then the turn passes in order of age or clockwise around the board. One can also decide by throwing a dice and letting the player with the highest number take the first turn.

## Step3

After decided on the player sequence, roll the dice and mark off the number rolled on your dice, starting with the “1” spot on the board. All players take turns to roll the dice and move their tokens.

## Step4

Take an extra turn if you roll 6 on your die after moving six places on the board. You may roll up to two 6s and take two extra turns. However, if you throw three 6s in a row, you must return to the very beginning of the board and should not move again until you roll another 6 on your turn.

## Step5

At the end of a move, if you land on a box with the base of the spacecraft on it, move your token along the spacecraft to a higher box on the board. This is a great boost to your journey. But, at the end of a move, if you land on a box that has the tip of a comet on it, move your token down along the comet to a lower spot on the board. This is the time to go back and revisit some of the objects you encountered while travelling.

## Step6

Follow the directions written on the box that you’ve landed on after taking a turn.

## Step7

The first person to reach the box marked “100” wins the game.

After the students finish the game, the teacher asks the winner to share his or her journey to the rest of the participants. Each player has to tell the story of their journey, including the objects encountered.

## CURRICULUM

Country | Level | Subject | Exam Board | Section
— | — | — | —
UK | GCSE | Physics | AQA Science A | Not in current curriculum
UK | GCSE | Physics | Edexcel | P1.3: 1-4
UK | GCSE | Physics | OCR A | P1.1: 1-6
UK | GCSE | Physics | OCR B | P2: f, g, h
UK | GCSE | Physics | WJEC | Not in current curriculum
UK | GCSE | Astrophysics | Edexcel | Unit 1: Topic 2
UK | KS3 | Physics | - | Space Physics
UK | KS2: Year 5 | Science | - | Earth and Space

## ADDITIONAL INFORMATION

- Travel through Solar System with NASA: https://solarsystem.nasa.gov/kids/
- Our Universe with ESA kids: http://www.esa.int/esaKIDSen/SEMF8WVLWFE_OurUniverse_0.html

## CONCLUSION

Astronomy themed snakes and ladders game engages students to learn about astronomical objects as they play forward. Apart from learning astronomy, students also improve counting and listening skills.

### ATTACHMENTS

- Attachment 1
- Attachment 2
- Objects List

### ALL ATTACHMENTS

All attachments

### CITATION

Yamani, A., 2014, *Snakes & Ladders Game*, astroEDU, doi:10.11588/astroedu.2014.2.81332

### ACKNOWLEDGEMENT

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