

Lesson Printables

Be a rockstar and only
print what you need!



Planners: 2-3

Maps

Sunlight: 4

Twilight: 5

Midnight: 6

Extras

Recording Logs: 7-8

Extra Challenge: 9

Extra Challenge Answers: 10

**Printing in the US? Scale to 'fit to printable area' in order to get the best print.*

LESSON 1: Shape and Space - Exploring compass directions

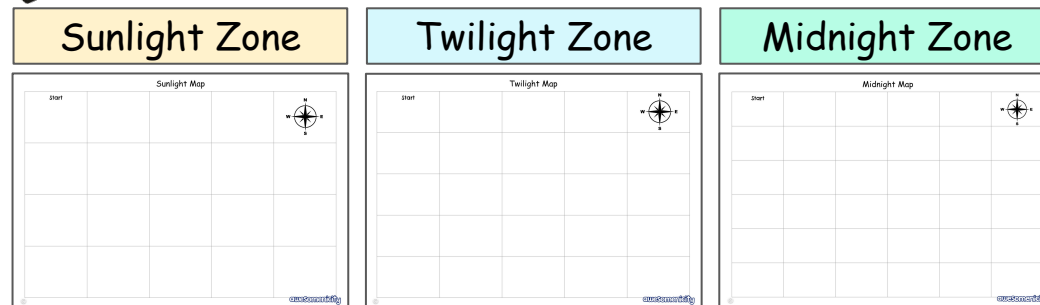
Starter	Main Activity and Input: Exploring compass directions and writing instructions.	Plenary
School Sports: Use the pictogram to answer the questions at the bottom of the slide. To support: 1. What information does the key give students? How can they use this information to help them answer the questions? Model identifying how many students have signed up for skating. To challenge: 1. What are some other questions students could ask looking at the pictogram?	Input: 1. Slide 6 shows a tiger who is floating in outer space. How does it know what direction it is travelling? What does direction mean? Discuss ideas as a class. 2. Slide 7 reveals a compass. What do students already know about compass points or directions? At this point, you could discuss possible acronyms for remembering how to lay out compass points. E.g. Naughty Elephants Squirt Water. 3. Slide 8 shows a 'space map' with different space treasures on it. These include a time portal, a black hole, planets, an alien, a spaceship, a comet and a moon. As a class, read the clue out loud. Once students get to the end of the clue, the astronaut gets to keep the object it lands on. What space item do students think the raccoon will land on once it has completed Clue 1? Ask a student to come to the board to model moving in the directions that the clue provides. Slide 9 reveals that the raccoon should land on the spaceship, so it now gets to keep that item. 4. Slides 9 and 10 repeat this process for two more sets of clues. Continue to have students come to the board to model moving according to the clues. Activity: Design your own space map with treasures and write compass clues. <i>*Note, this might take more than the allotted time for a normal lesson. You might want to break this activity into two parts: constructing maps and clues and then swapping maps so that students can test out each other's clues.</i> 1. Print the maps for each learning zone. Students could work in pairs or individually to draw (or write) 'treasures' that can be found on their map. Students do not need to stick to the space theme. The treasures could be anything. E.g. Dragon eggs, sports equipment, jewels, shapes, etc. Once students have created their map, they should write clues that use compass directions in order to instruct a peer to collect different items on their map. For students who might need a more structured activity, we have also included an extra challenge which requires students to follow clues before creating their own. <i>Please note, this includes directions like North West, etc.</i> To support: 1. Sunlight Zone map is a 4 x 5 grid. 2. Provide students with a counter, so they can practise physically moving in different directions and then write down their clues. 3. Print the clue cards found in the printables, so students can record their clues in an organised fashion. To challenge: 1. Encourage students to use several steps within each clue. 2. Midnight Zone students could use additional compass directions. This might require having a small group discussion about which directions are between different compass points. E.g. Between North and East you find North East. Between West and North you find North West, etc. (If students use these types of compass directions, their peers will move in a diagonal fashion on the map.) 3. Students could try the extra challenge.	Map Swap: Students can swap maps. Check for understanding: 1. Can students use the clues to work out which items they can collect on a peer's map?

Things that might be useful for this lesson:

- Individual whiteboards:
 - Help students to record their thinking and share ideas with others.
- Real compasses:
 - For students to see/explore.
- Real maps/atlas:
 - For students to connect to directions.
- Mark out actual N, S, E and W in class:
 - For students to connect with the lesson/for discussion.



Peek at the Printables:

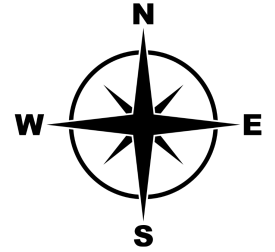


Greener Alternatives:

- Students could draw the maps in their books, use recycled grid paper or create them on their whiteboards.
- If you have chess boards or checkers boards, these could be used as 'maps'.

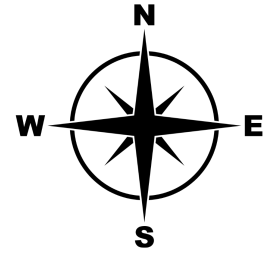
Sunlight Map

Start

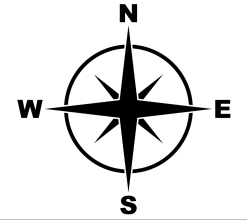


Twilight Map

Start



Midnight Map



Start

Clues	Item Collected

Clues	Item Collected

Clues	Item Collected

Extra Challenge

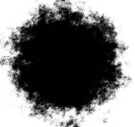
Start					
					
					
					
					
					

Items Collected

Clues

1. Start in the start box. Move South 3 spaces and then East 3 space.
2. Move West 2 spaces and then North 2 spaces.
3. Move East 2 spaces and then South East 2 spaces.
4. Move North 3 spaces and West 2 spaces.
5. Move South 4 spaces and then South East 1 space.
6. Move North West 3 spaces and then East 1 space.
7. Create your own clues so that you collect all of the remaining items.

Extra Challenge Answers

Start					
					
					
					
					
					

Items Collected
Red Planet
Rocket
Spaceship
Alien
Moon
Rover (car)

Clues

1. Start in the start box. Move South 3 spaces and then East 3 space.
2. Move West 2 spaces and then North 2 spaces.
3. Move East 2 spaces and then South East 2 spaces.
4. Move North 3 spaces and West 2 spaces.
5. Move South 4 spaces and then South East 1 space.
6. Move North West 3 spaces and then East 1 space.
7. Create your own clues so that you collect all of the remaining items.
(Answers will vary. Students should collect the black hole, comet and purple planet.)