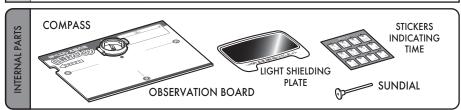
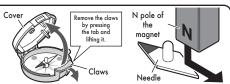


- Please read the instructions carefully before carrying out any observations.
- Be sure to put small parts in the bag to avoid losing them.
- Be sure to use the light-shielding plate when looking at the sun.



If the compass needle is not correct, remove the needle. Rub the red side of the needle with the N-shaped side of the magnetic strip in the direction of the arrowhead two or three times, as shown in the diagram.



### When the sun shines on something, where does the shadow form?



## **Sunlight & Shadow**

• Using a light shading plate, study the direction of the shadow and the direction of the sun.

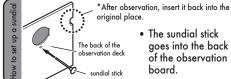


• Don't look at the sun for too long! It may damage your eyes.

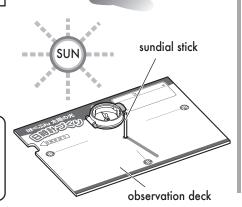


#### Sun & Shadow of the stick

• Set up a sundial stick on the observation plate in the sun, and measure the shadow of the sundial stick and the sun's direction.



• The sundial stick goes into the back of the observation board.

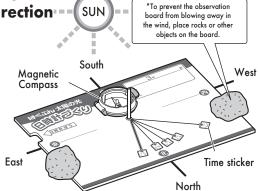


#### What is the relationship between the movement of shadows and the sun?



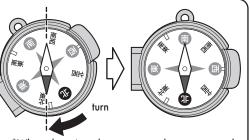
# The movement of the shadow and the direction of the sun

- · Use a magnetic compass to determine the direction and adjust the direction of the observation board.
- · Find the direction and length of the shadow every hour and put a sticker on the time of day when you observe it.
- Draw a line between the hour markers and the sundial stick.



#### How to use the compass

- It is best to use in flat areas where there is nothing made of iron around.
- The compass's needle stops pointing in the direction of north and south.
- When the needle stops moving, turn the compass to align the red side of the needle with the word "north."



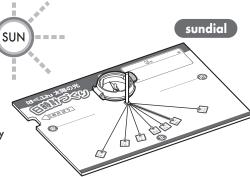
\*When observing, do not remove the compass and slowly rotate the observation board.

#### Will the observation board act as a sundial?



· Align the direction of the observation board and find out what time the shadow of the stick is pointing.

\*The shade and length of the shadow will vary depending on the season and region you are observing from.



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