- **Classroom activity - Making a Sundial**

Before the invention of the clock, people used the sky to help them find their way and tell the time of day or season. Sundials, or "rigui" 日晷 in Chinese, were basic instruments with a mounted arm called a gnomon which cast a shadow on a bronze or stone dial when the sun shone upon them. The shadow indicated the time of day. The earliest sundial of China, according to historical documents, was the flat horizontal dial plate, or the horizontal sundial invented in 574 AD.

Make a sundial to understand how shadows cast by planets (the sun in this case) can help us to tell the time. You will also need scissors, glue, a compass, sellotape, a craft knife, and some cardboard.

**Instructions**

- With glue, stick the two templates onto sheets of cardboard or old cereal packets to reinforce them.

- Take the main sundial template. Carefully cut down the central line of the dial (along the cut through here line) using the craft knife. Make sure the template is on a cutting mat or hard surface and take care not to cut yourself.

- Take the template for the arm or gnomon. Cut out the shape of the gnomon and fold it along the line to firm a flap at the base.

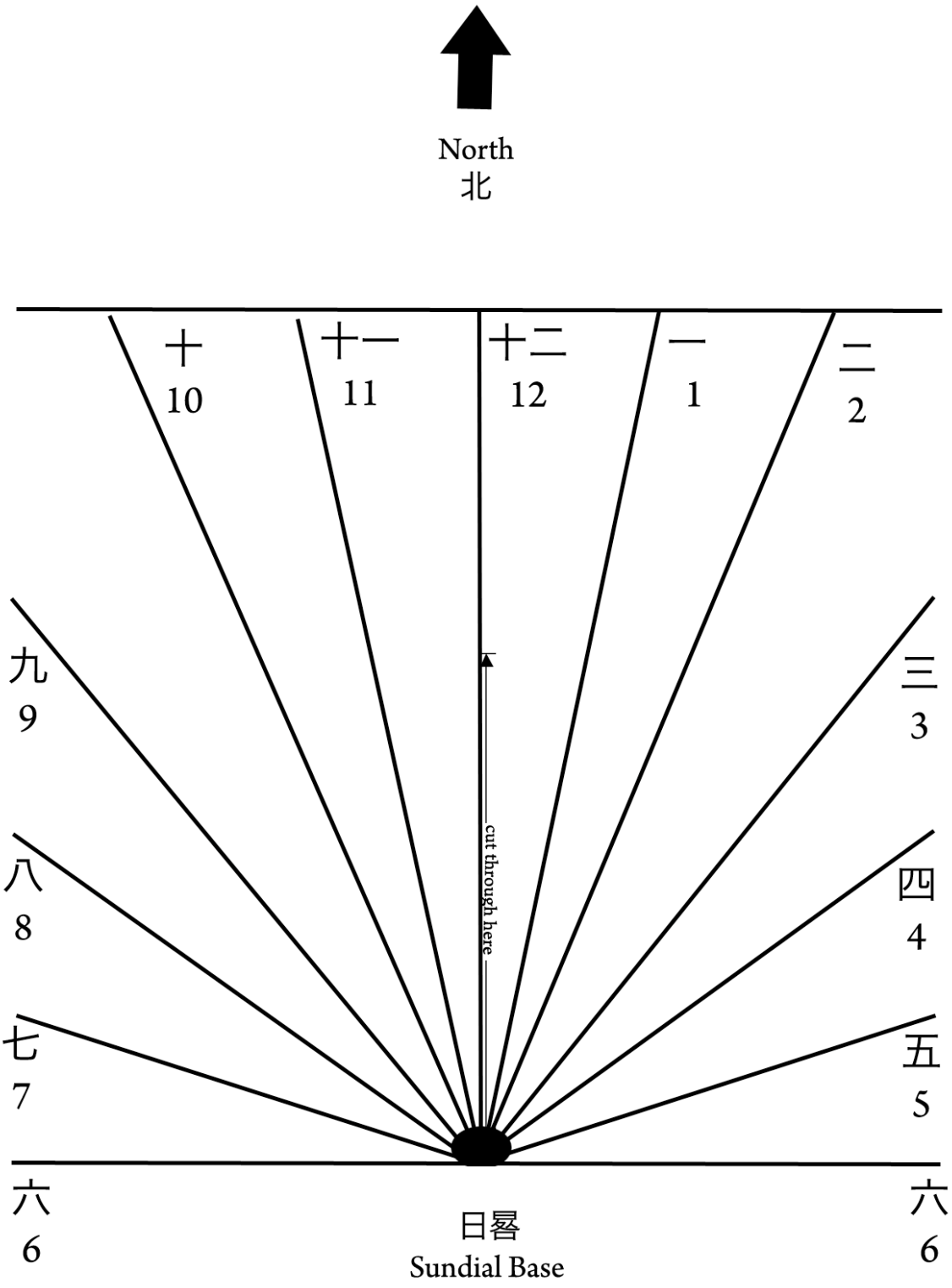
- Insert the folded flap of the gnomon inside the slit you made in the main sundial template. Make sure the right-angle of the arm is in line with the bottom of the sundial (the point where all the lines meet on the template)

- Stick the bottom of the gnonom to the base of the sundial with tape to hold it in place.

- Take your sundial outside ( on a sunny day!) Find North using the compass (turn around with the compass flat in your hand until the arrow points to North).

- Place your sundial on a flat surface, and line up the arrows on the top of the sundial to point north.

- You should be able to tell the time. by reading where the shadow is cast on the flat dial.


North
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11
十二
12
一
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2
九
9
三
3
cut through here
八
8
四
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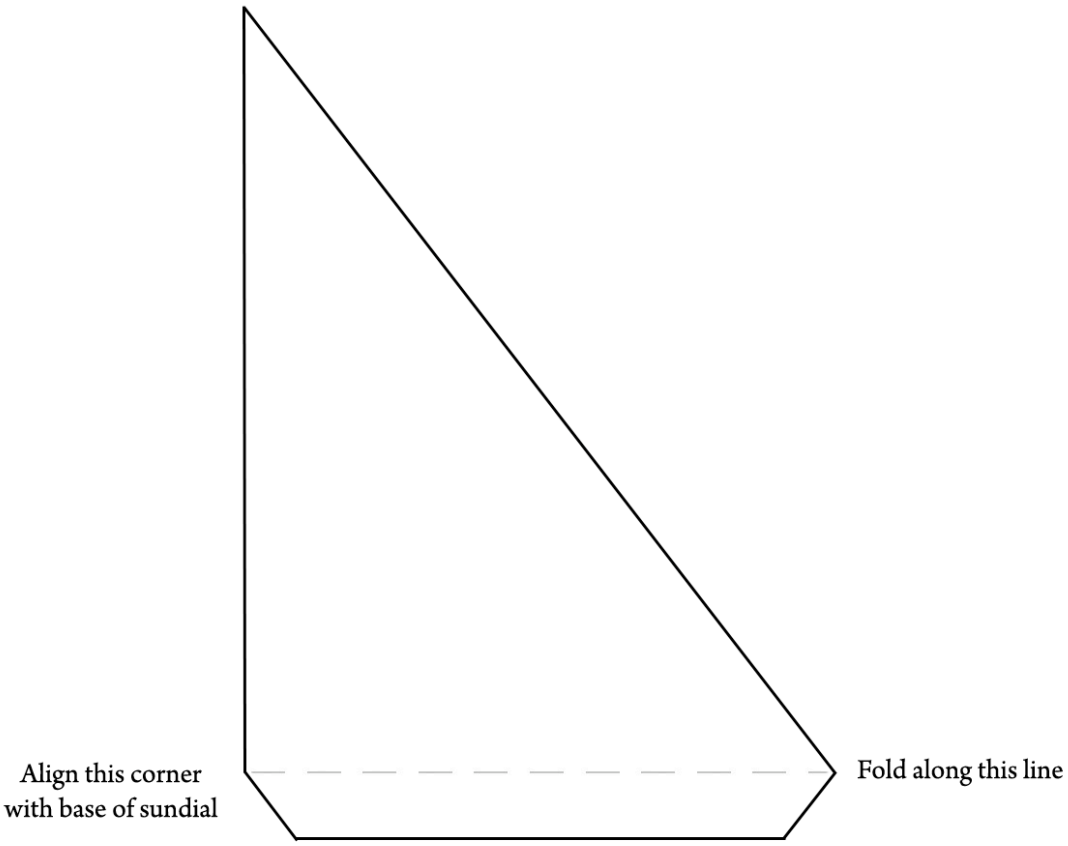
五
5
六
6
六
6
日晷
Sundial Base




Base of Gnomon