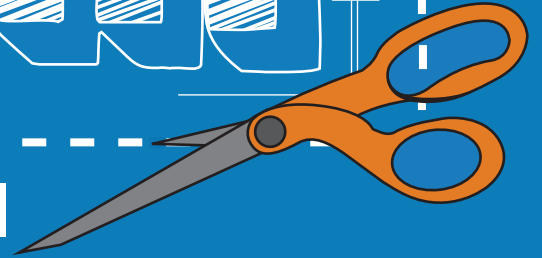




Inquisikids™

HANDS-ON HISTORY

World History II



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Build. Play. Learn.

InquisiKids™ “Hands-on History World History II”

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HANDS ON HISTORY

World History II



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ASTROLABE QUADRANT

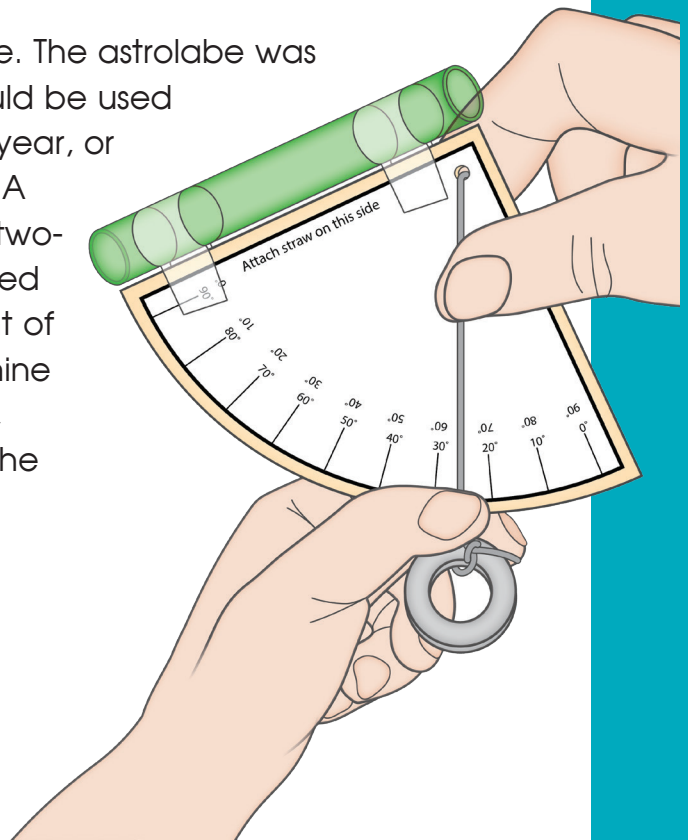
ASTROLABE QUADRANT

Have you ever been on a long trip that takes you outside your city or town? When people journey beyond their communities, they rely on tools to help them find the way. Nowadays, we have smartphones and GPS (Global Positioning Systems) to tell us which direction to go and how far we've traveled. Before the advanced technology of modern times, we relied on maps created by those who charted the course and found the best routes to get to a new location. For travelers hundreds of years ago, none of these things existed. How did they find their way? Through tools like the one you'll build today.

A quadrant is a derivative of the astrolabe. The astrolabe was a multipurpose astronomical tool that could be used to measure the time of night, the time of year, or the altitude of any object on the horizon. A quadrant is a more portable version of a two-dimensional astrolabe. Early navigators used quadrants at sea. By measuring the height of Polaris (the North Star), they could determine their latitude. In the Southern Hemisphere, sailors could use a quadrant to measure the height of the Southern Cross since Polaris would not be visible.

After you make your quadrant, follow the steps at the end of the instructions to find your home's latitude.

- **Difficulty: 1**
- **Parent Time Required: 1**



Materials We Provide:

- (1) template
- (1) black cord
- (1) straw
- (1) washer
- (1) 4 ¼ x 5 ½ inch cardstock
- craft glue (packaged separately)

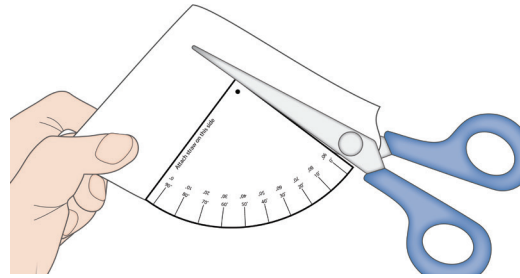
Materials You Provide:

- scissors
- clear tape
- ballpoint pen or push pin

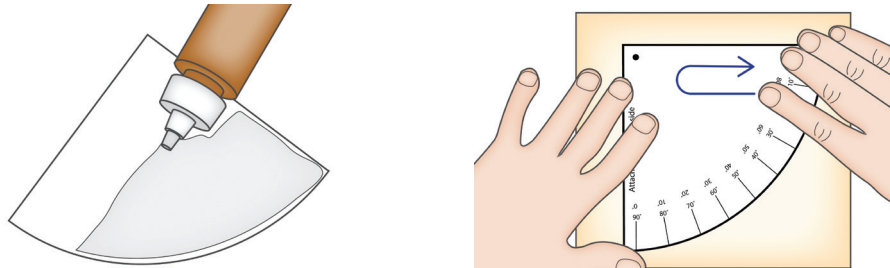
ASSEMBLY INSTRUCTIONS:

1. CREATE THE SIDE OF THE QUADRANT

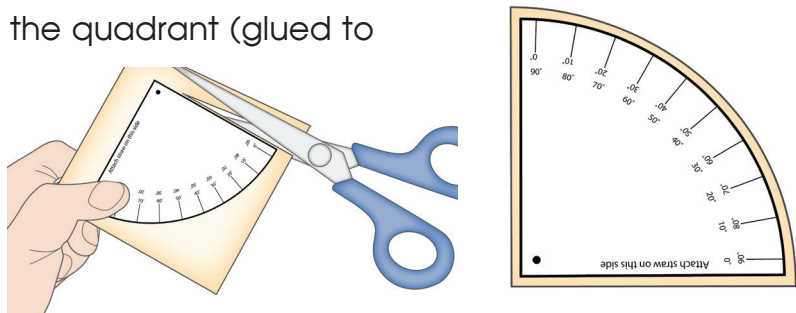
- a) Children: Cut out the quadrant template on p. 85.



- b) Children: Glue the template onto the cardstock.

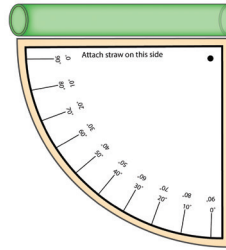


- c) Children: Cut out the quadrant (glued to the cardstock)

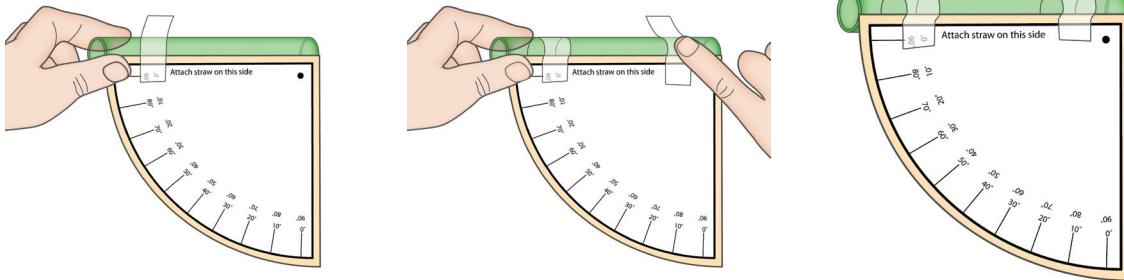


2. ATTACH THE STRAW

- a) Children: Line the edge of the straw along the side of the quadrant. Look for the side that says "Attach straw."

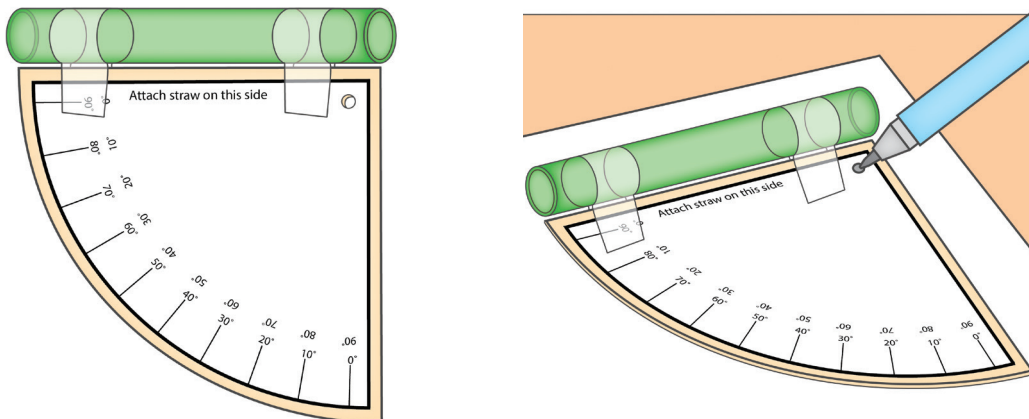


- b) Children: Secure the straw in place with clear tape.



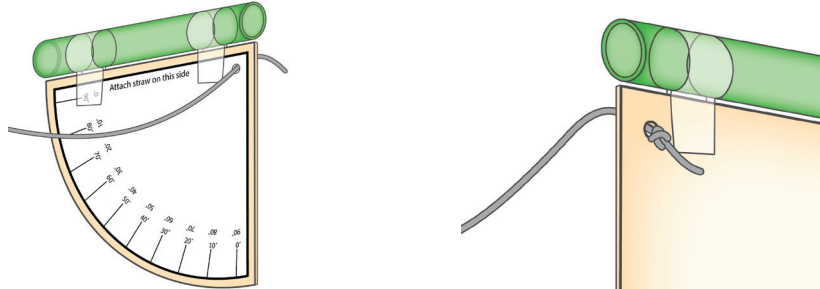
3. CREATE THE HOLE FOR THE CORD

Parent: Using a ballpoint pen or push pin, puncture the side of the quadrant where indicated by the black dot.



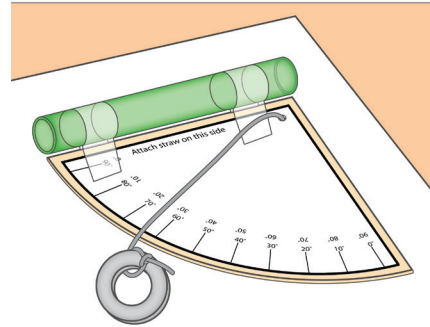
4. TIE THE CORD TO THE WASHER

- a) Children: Take one end of your cord and insert it through the hole in the side of the quadrant. Then, tie a knot but be careful not to use too much of the cord.



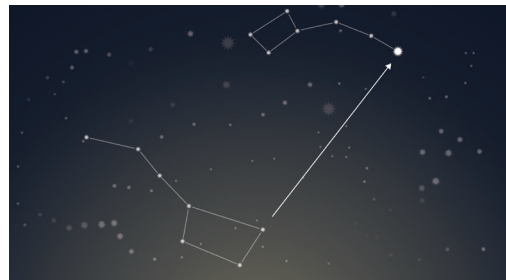
- b) Children: Take the other end of the cord and tie it around the washer.

NOTE: Check the length of the cord to make sure that when you look through the straw the washer hangs below the side of the quadrant.



USING YOUR QUADRANT:

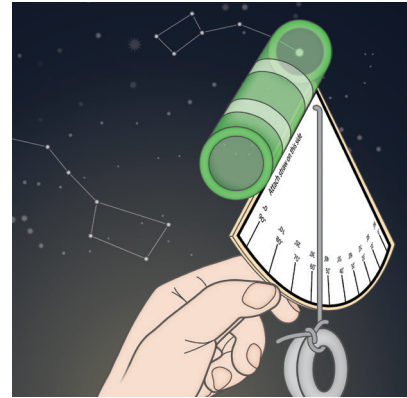
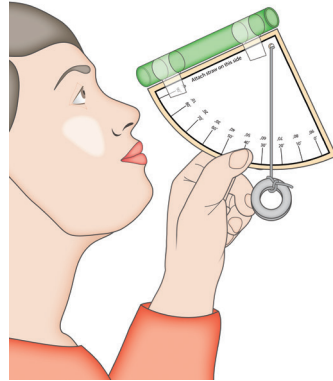
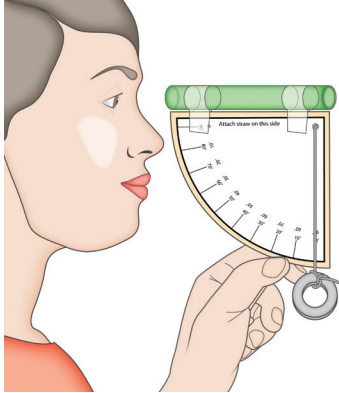
- 1) On a clear night, ask your parents for help to locate Polaris, the North Star.*



*If you live in the Southern Hemisphere, do steps 1-7 using the Southern Cross.

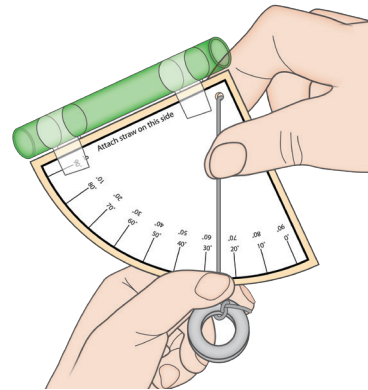
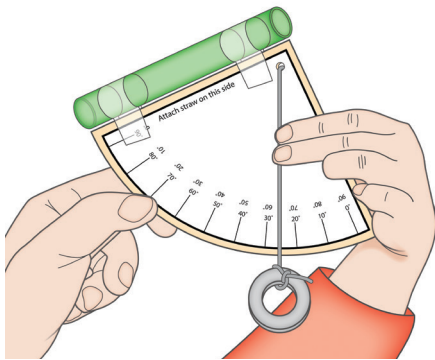
USING YOUR QUADRANT CONTINUED

- 2) Holding your quadrant up to your eye, with the straw at the top, find Polaris in your quadrant's viewer.



- 3) After finding Polaris, hold your hand steady until the cord with the washer stops moving.

- 4) Pinch the cord against the side of your quadrant without moving it from its original measurement.



- 5) Record the angle of Polaris on a piece of paper.

- 6) Repeat **steps 2-5** twice more for accuracy.

- 7) Add the three measurements together and then divide by three. That's the latitude of your home!