# **Unit 7 Lesson 6: A Special Point**

1 Notice and Wonder: Salt Pile (Warm up)

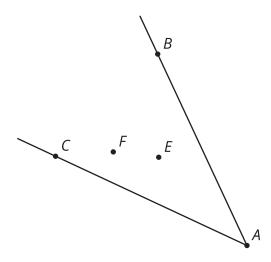
**Student Task Statement** 

What do you notice? What do you wonder?



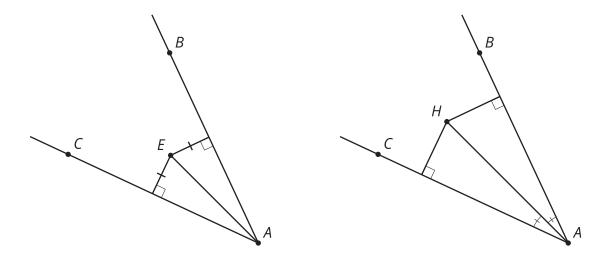
# 2 Point and Angle

### **Images for Launch**



#### **Student Task Statement**

Here is an angle BAC with 2 different sets of markings.

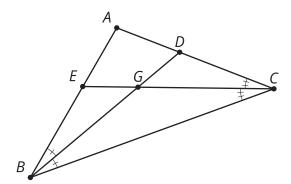


- 1. Point E is the same distance away from each of the 2 rays that form angle BAC. Make a conjecture about angles EAB and EAC and prove it.
- 2. Point H is on the angle bisector of angle BAC. What can you prove about the distances from H to each ray?

### 3 What If There Are Three Sides?

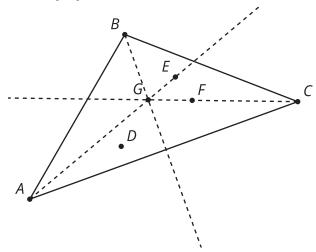
#### **Student Task Statement**

Two angle bisectors have been constructed in triangle ABC. They intersect at point G.



- 1. Sketch segments that show the distances from point G to each side of the triangle.
- 2. How do the distances from point G to sides AB and BC compare? Explain your reasoning.
- 3. How do the distances from point G to sides AC and BC compare? Explain your reasoning.
- 4. Will the third angle bisector pass through point *G*? Explain your reasoning.

#### **Activity Synthesis**



## **Images for Activity Synthesis**

