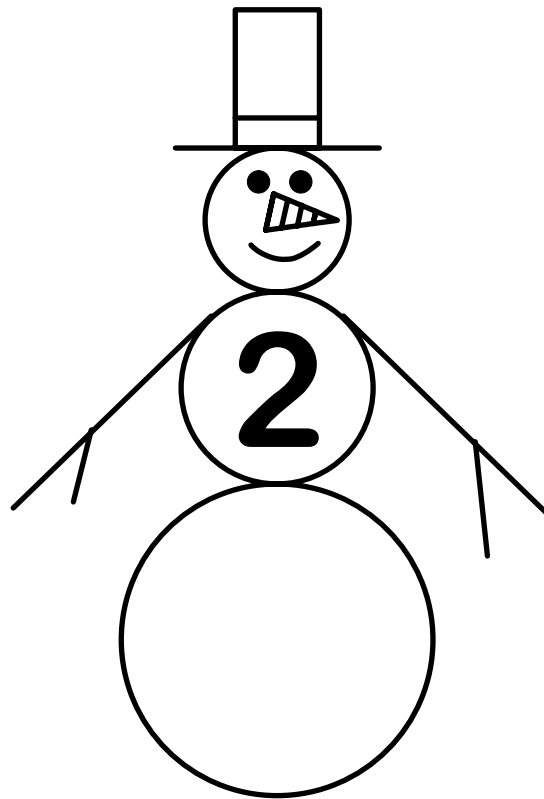


Series: 95-07

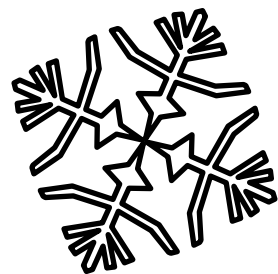
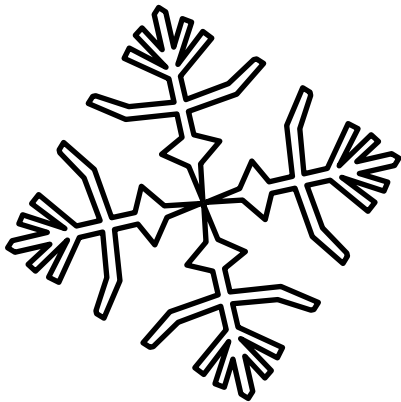
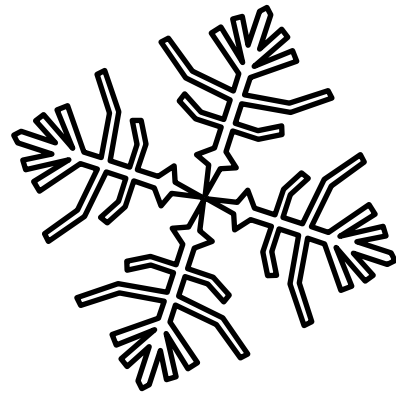
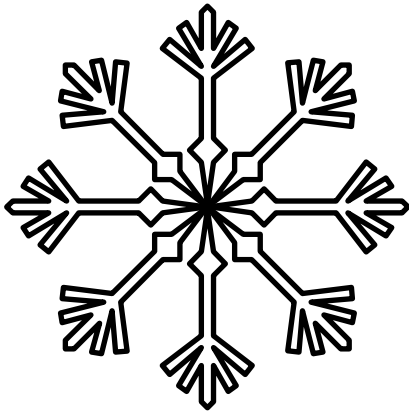
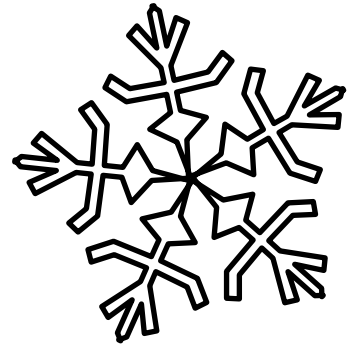
# Billy and Maria Learn About Winter Weather

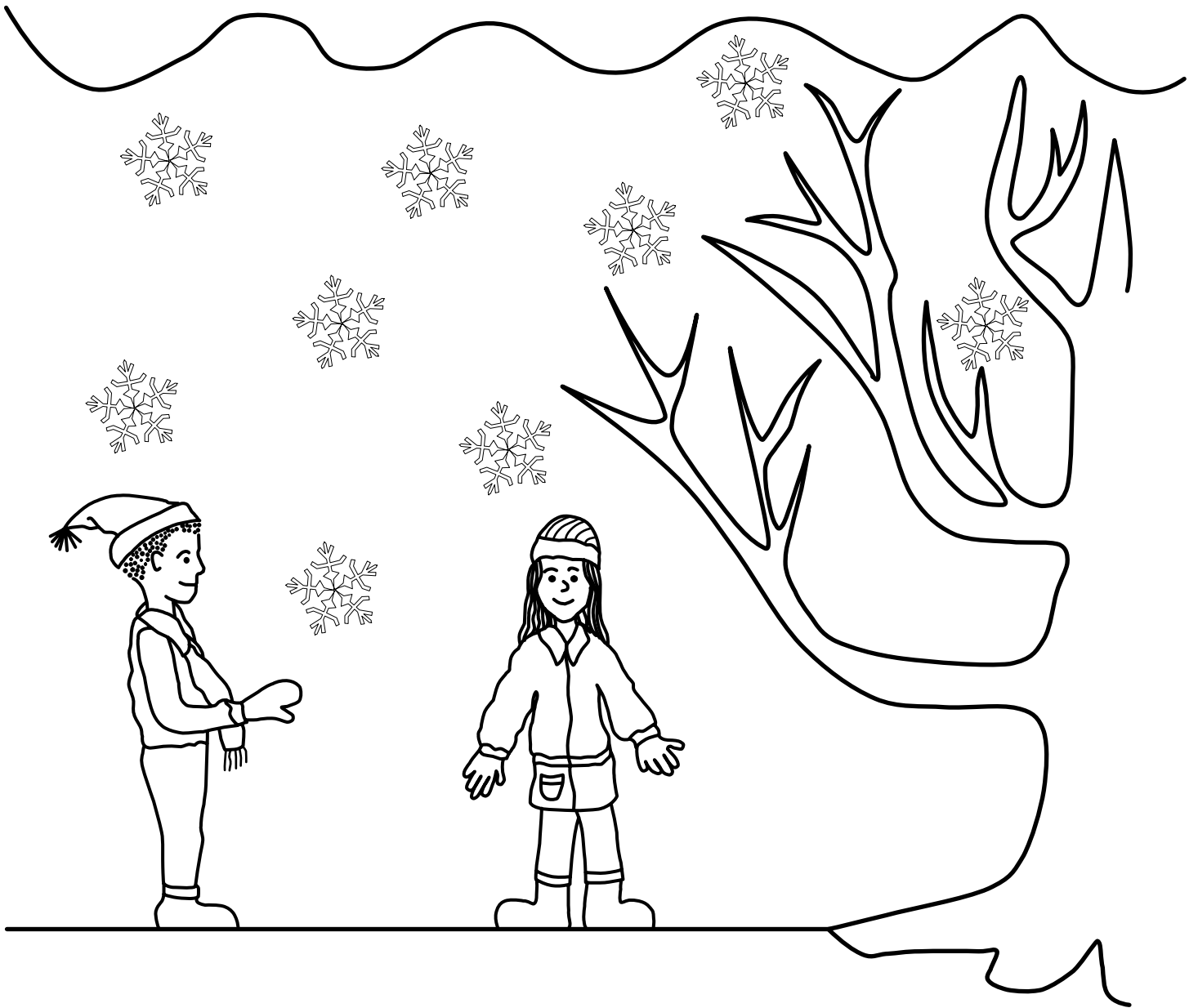
Part 2 of 3



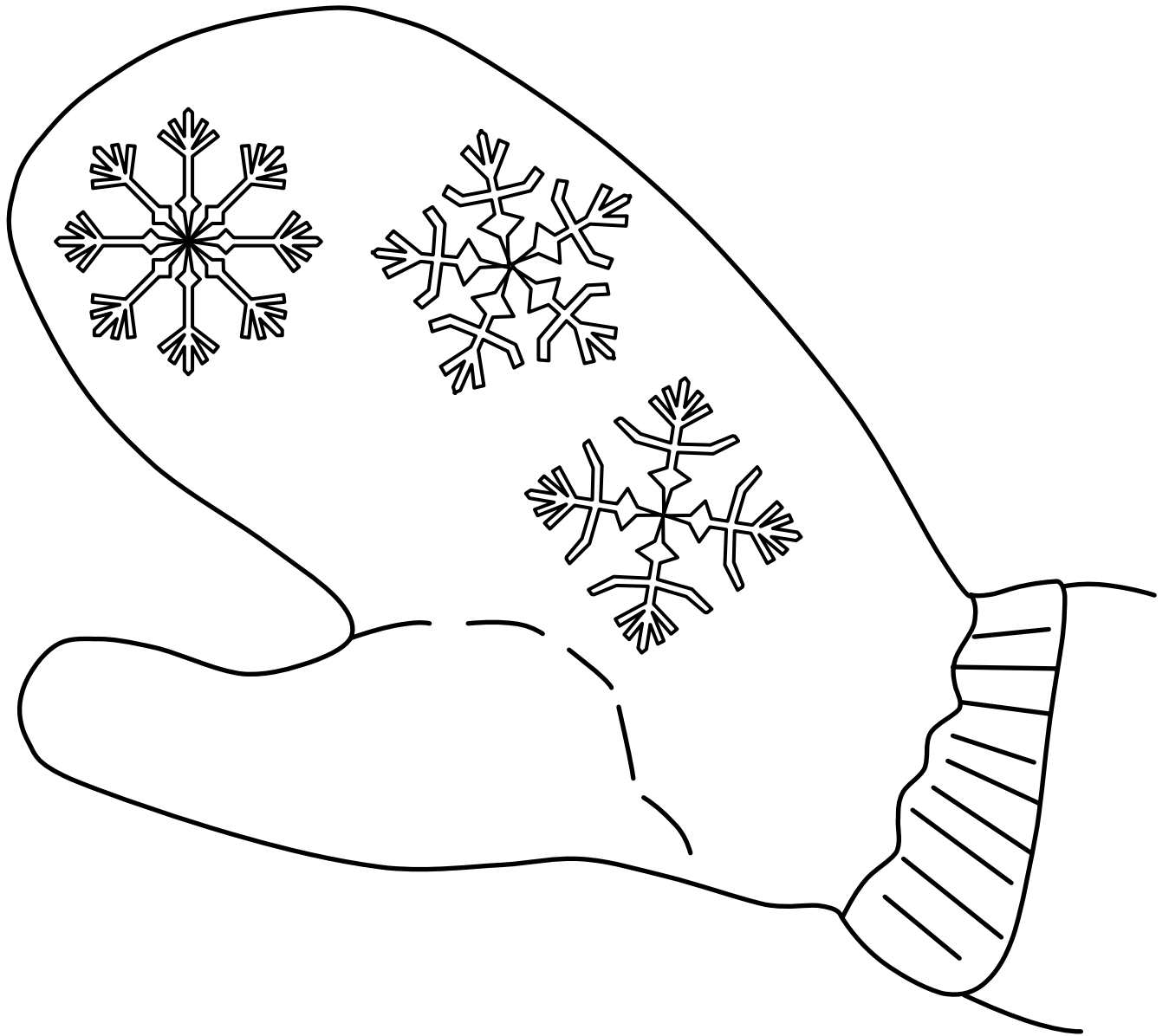
**Billy, Maria  
and the**

**Snowflake**

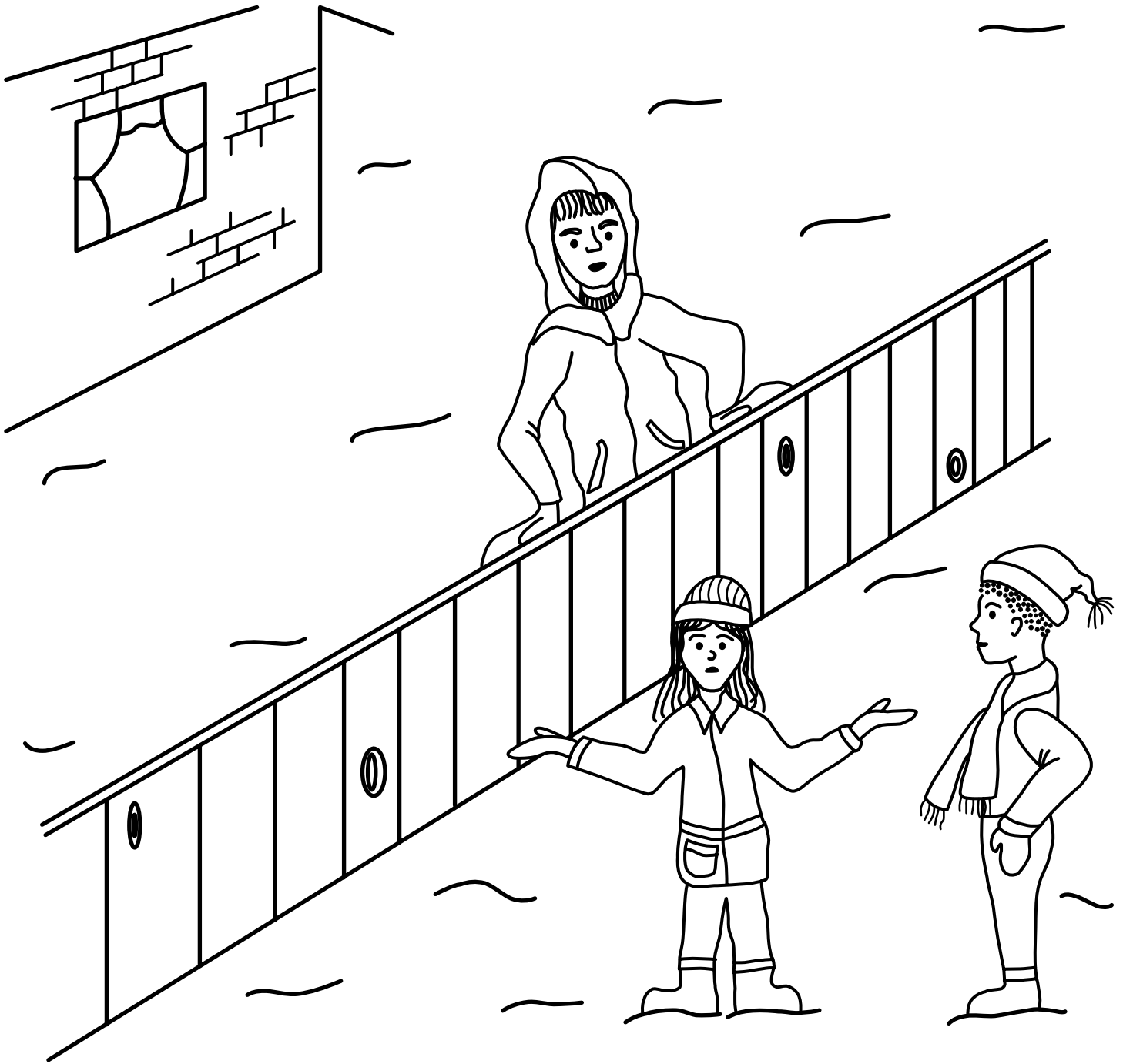




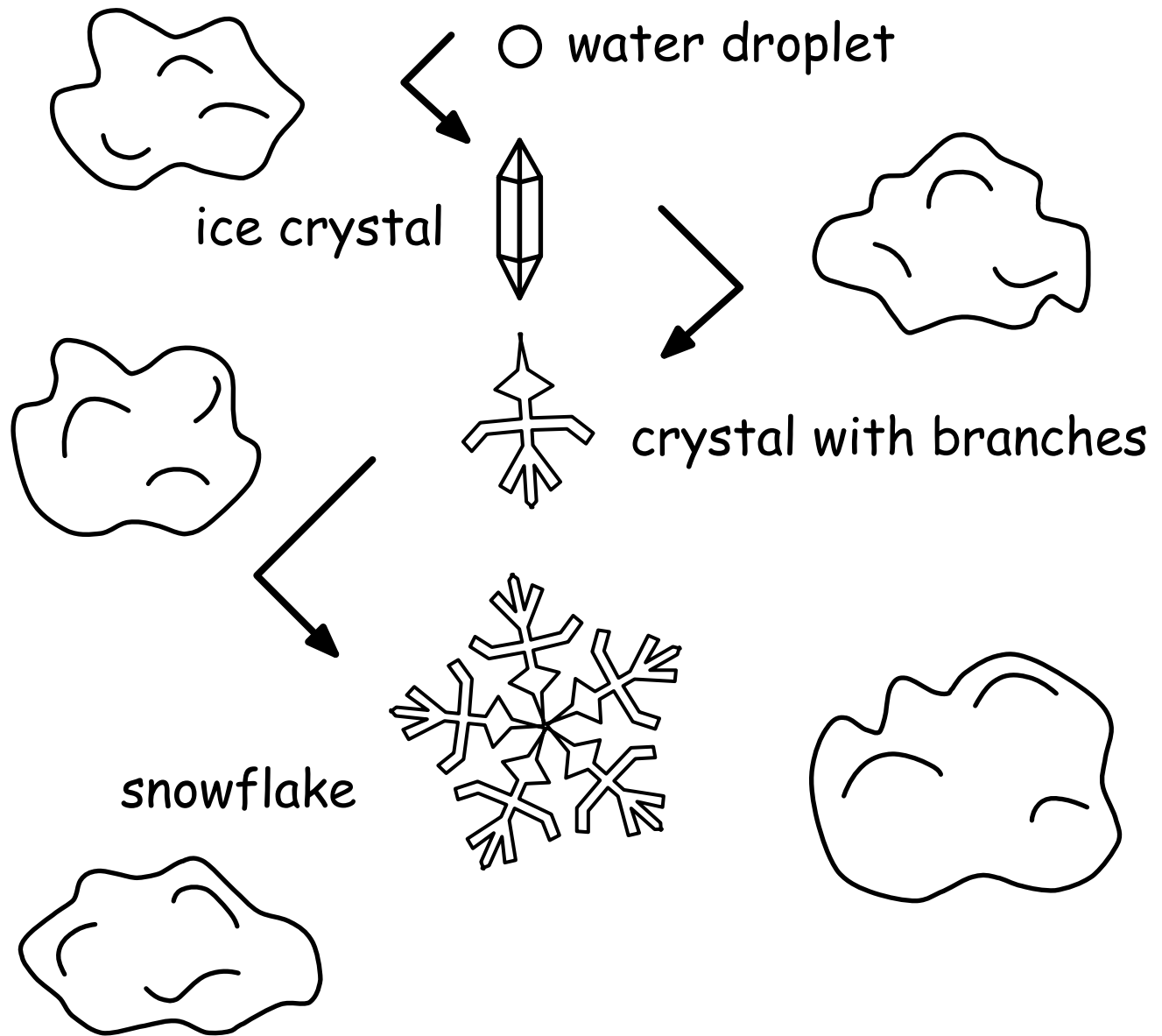
Billy and Maria were outside playing one cold day when it began to snow. As they watched, they noticed that each little flake could be seen as it fell. Billy stuck out his mitten and caught a few snowflakes.



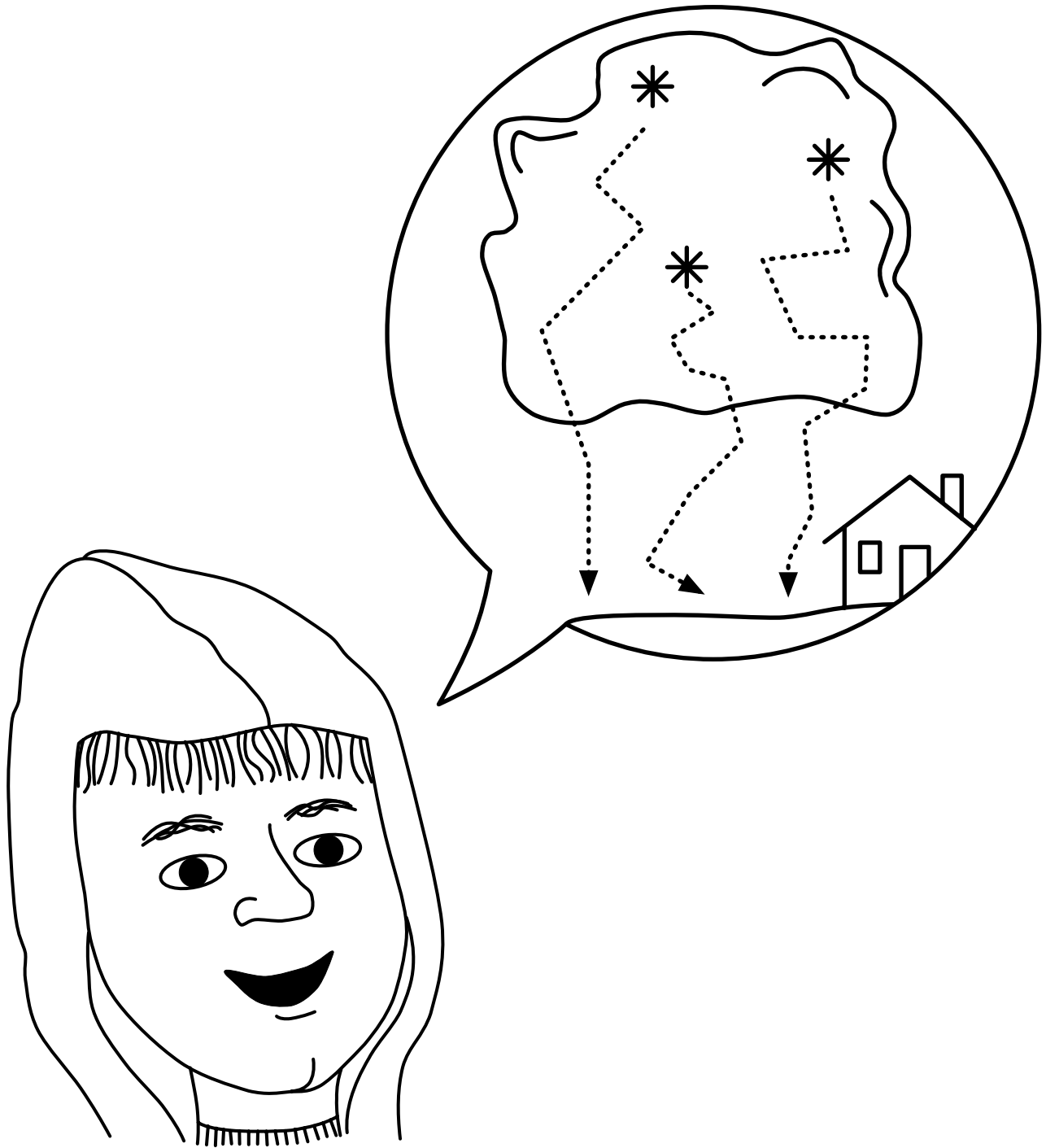
His mittens were cold so the snowflakes did not melt quickly. Billy looked closely at the snow in his hand. He noticed that none of the snowflakes looked alike.



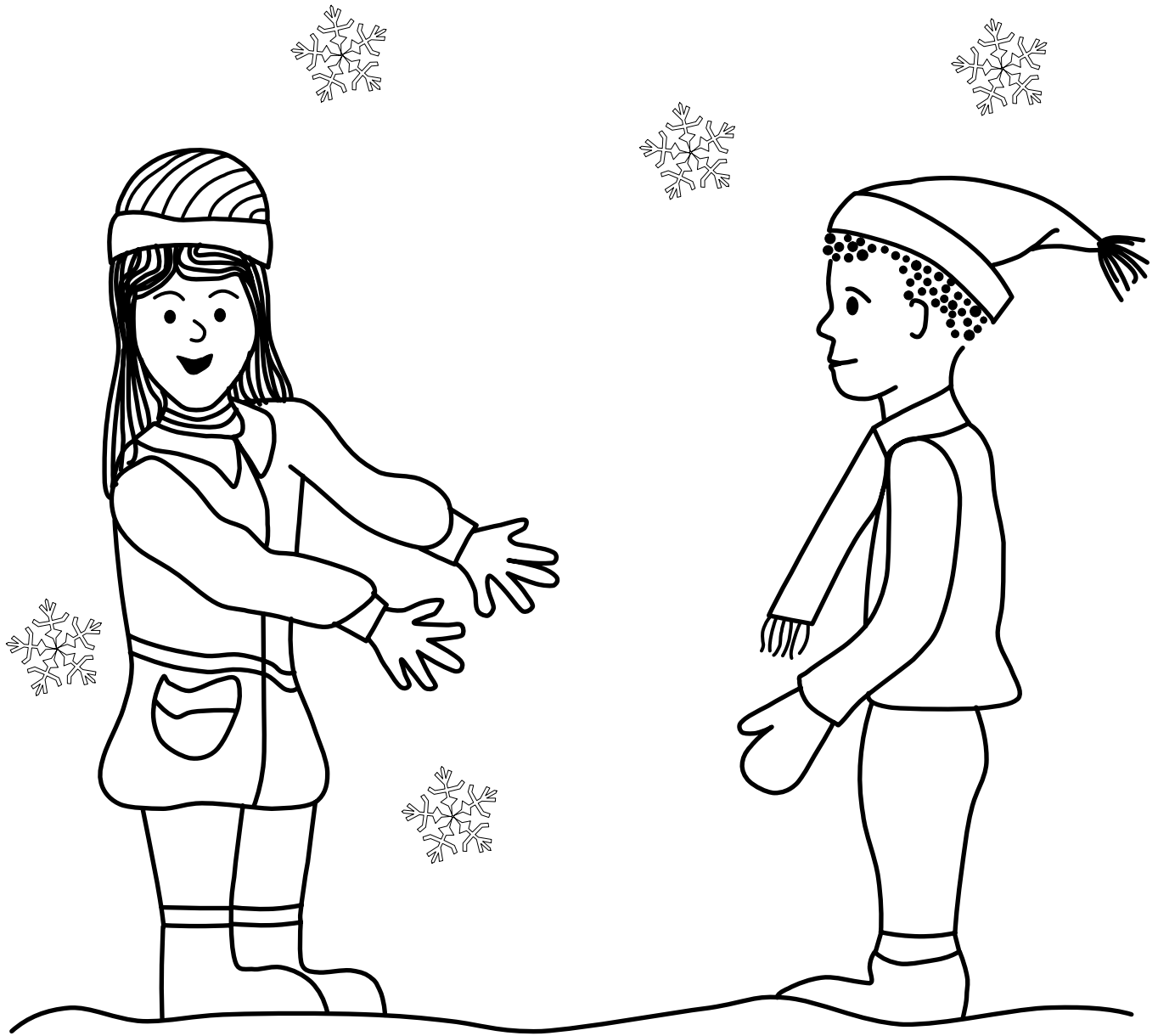
"I wonder why these snowflakes all look different?" Billy asked Maria. Neighbor John was outside and heard this question. He decided to give Billy and Maria a lesson about snow.



Neighbor John said that snowflakes were really groups of ice crystals. He told them that a water droplet freezes into an ice crystal. If it is cold enough, the crystals grow branches. When it gets heavy enough, it falls out of the cloud. As it falls it sticks to other ice crystals and becomes a snowflake.

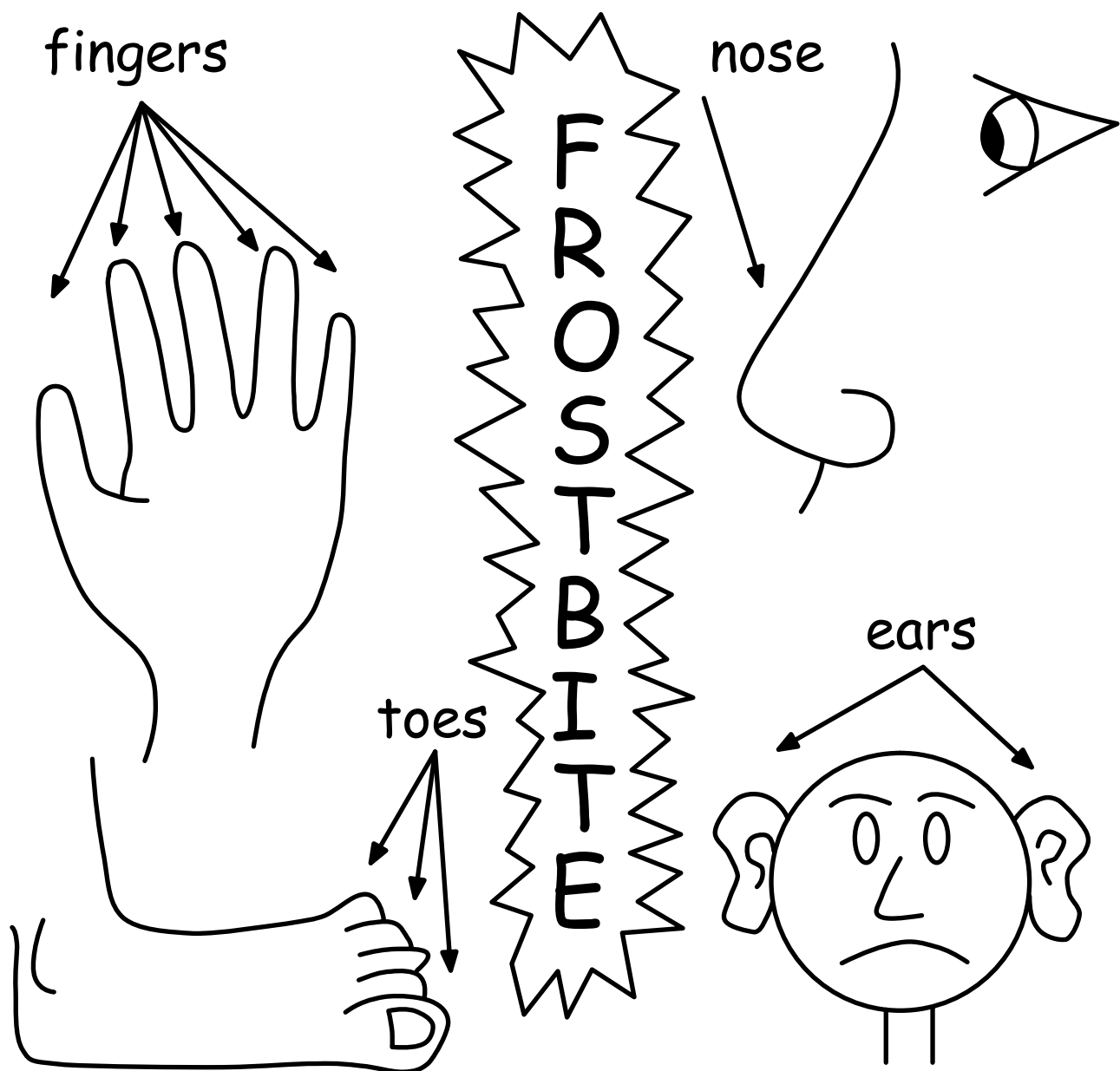


Each ice crystal is made in a different part of the cloud. Every ice crystal falls to the ground along a different path. Because of this, it is very hard for two snowflakes to look alike.

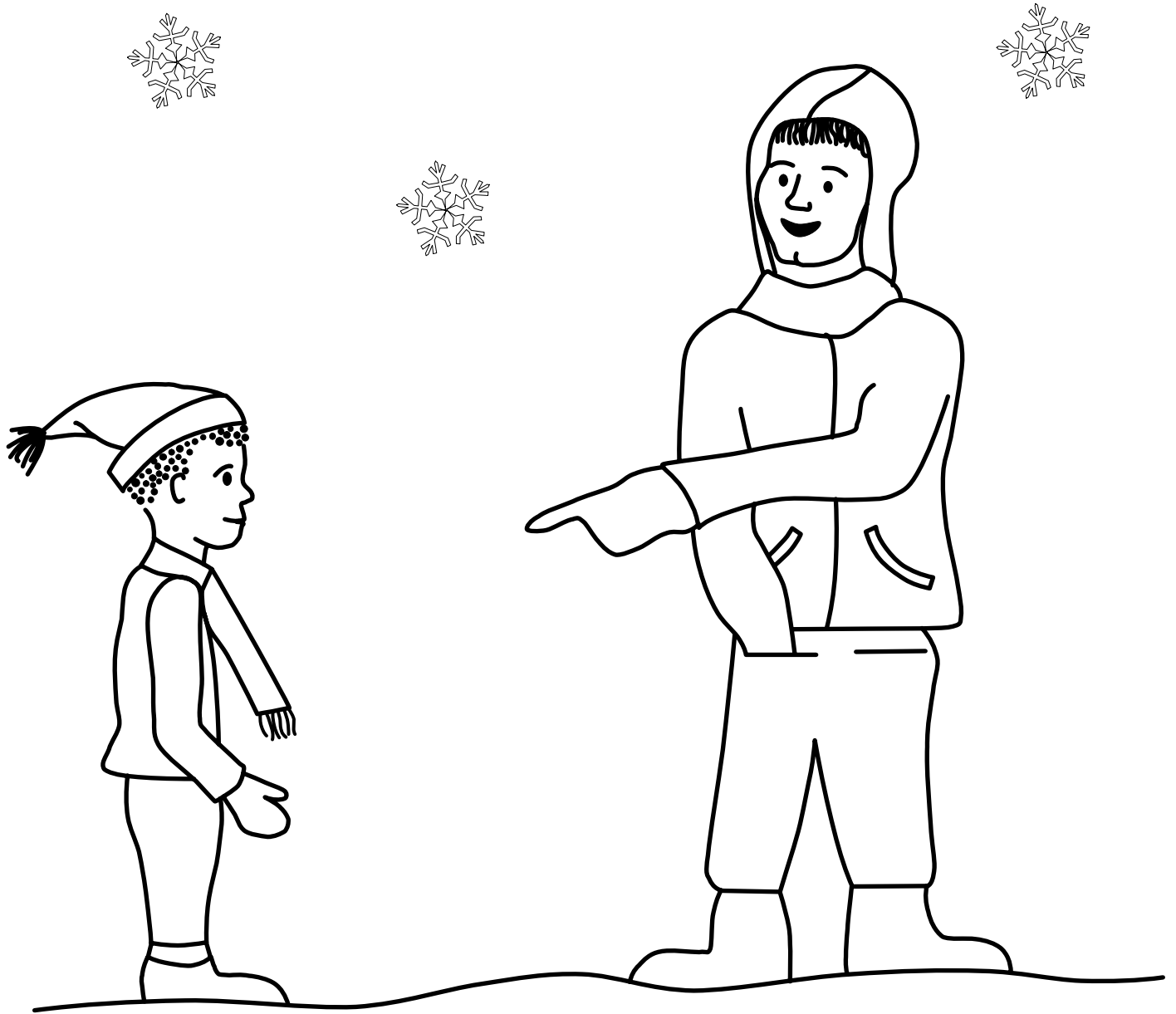


Billy and Maria were glad they now knew how snowflakes were made. "I had better go home now Billy, my fingers are getting cold", said Maria. Neighbor John said that they should all go inside and stay warm so they would not get frostbite.

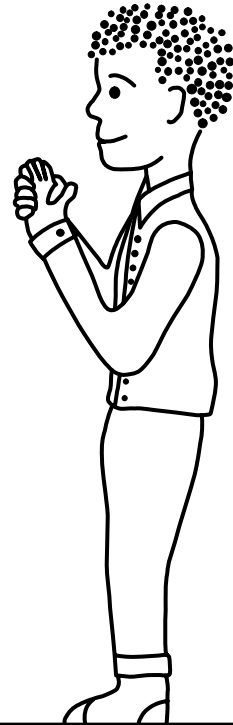
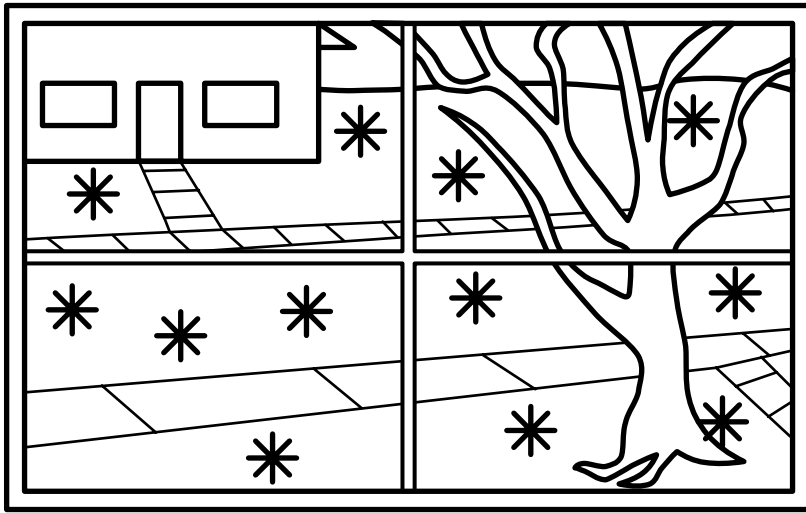




"What is frostbite?" asked Billy. Neighbor John told him that you can get frostbite when your body gets too cold. The cold damages your body and causes a loss of feeling. This usually happens to your fingers, toes, nose, and ears. It is bad to get frostbite!



"If you think you have frostbite, you should get help quickly. If you have to wait for help, **SLOWLY** rewarm the hurt area", said Neighbor John. Billy learned that the best way not to get frostbite is to keep warm and not stay outside in the cold for long periods of time.



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Since Maria had gone home, Billy decided to go inside. Billy was glad he did not get frostbite and decided to stay warm for awhile. He watched the snow fall outside the window. As he looked he thought about the trips each of the snowflakes was taking to fall to the ground. It was all very interesting!

## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The National Oceanic and Atmospheric Administration was established as part of the Department of Commerce on October 3, 1970. NOAA Mission responsibilities are to assess the socioeconomic impact of natural and technological changes in the environment and to monitor and predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth.

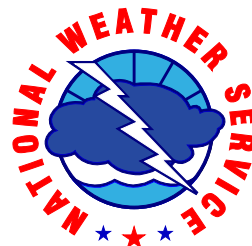
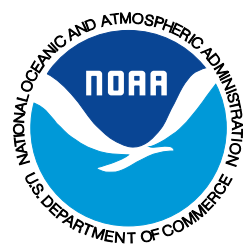
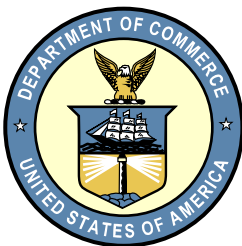
## NATIONAL WEATHER SERVICE

An 1870 act of Congress created the U.S. Weather Bureau under the U.S. Army Signal Corps. Subsequent Congressional action in October 1890 placed the Weather Bureau under the Department of Agriculture. The Weather Bureau was transferred to the Department of Commerce in 1940. In 1965, the Environmental Science Services Administration (ESSA), which included the Weather Bureau, was created under the Department of Commerce. Still operating under ESSA, the Weather Bureau was renamed the National Weather Service in 1967. ESSA became the National Oceanic and Atmospheric Administration in 1970.

" The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information data base which can be used by other governmental agencies and the private sector. "

## NATIONAL SEVERE STORMS LABORATORY

"The National Severe Storms Laboratory, in partnership with the National Weather Service, enhances NOAA's mission through a balanced program of research to advance the understanding of weather processes, research to improve forecasting and warning techniques, development of operational applications, and transfer of understanding, techniques, and applications to the National Weather Service and other public and private sector agencies."



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