

The Three Little Penguins

Objective: Learn how to use broadcast messages to trigger events and sequence a multi-scene animation.

Characters: 1 Polar Bear (The Villain), 3 Penguins.

Props: 3 Houses (Snow Pile, Ice Blocks, Solid Igloo).

Step 1: Setting the Winter Stage

First, we need to prepare our icy workspace and add our characters.

- 1 Open a new Scratch project and delete the default Cat sprite.
- 2 Click **Choose a Backdrop** and select a snowy scene (e.g., **Winter** or **Arctic**).
- 3 Click **Choose a Sprite** and add:
 - One **Polar Bear** (This will be our hungry villain).
 - Three **Penguins** (You can use the same penguin sprite three times).
- 4 Rename your penguins in the sprite menu to **Penguin 1**, **Penguin 2**, and **Penguin 3** to keep the code organized.

Step 2: Placing the Houses

We need three cold houses for the polar bear to try and blow away.

- 1 Use the **Paint** tool in the sprite menu to draw three simple houses, or find images online and upload them.
- 2 Name the sprites: **Snow House**, **Ice House**, and **Igloo**.
- 3 Drag them onto the stage:
 - Place the **Snow House** on the far Left.
 - Place the **Ice House** in the Middle.
 - Place the **Igloo** on the far Right.
- 4 Place **Penguin 1** next to the Snow House, **Penguin 2** next to the Ice House, and **Penguin 3** next to the Igloo.

Step 3: Scene 1 – The Snow House Scatters

We will use the broadcast block to tell the characters when it is their turn to act.

1. Code for Penguin 1 (Waiting at the Snow House):

when [Green Flag] clicked

show

go to x: -150 y: -100 (Adjust to your Snow House location)

wait 2 seconds

broadcast [Bear Attack 1 v]

2. Code for the Polar Bear:

when [Green Flag] clicked

hide

go to x: -220 y: -100 (Start off-screen on the left)

when I receive [Bear Attack 1 v]

show

glide 2 secs to x: -150 y: -100 (Move to the Snow House)

say [I will huff and puff and blow this snow away!] for 3 seconds

broadcast [Blow Down Snow v]

3. Code for the Snow House Sprite:

when [Green Flag] clicked

show

when I receive [Blow Down Snow v]

hide (The snow scatters!)

broadcast [Run to Ice House v]

Step 4: Scene 2 – The Ice House Shatters

Penguin 1 waddles away quickly, and the Polar Bear attacks the second house.

1. Code for Penguin 1 (Waddling Away):

when I receive [Run to Ice House v]

glide 1 secs to x: 0 y: -100 (Move to the Ice House)

2. Code for the Polar Bear (Attacking again):

when I receive [Run to Ice House v]

wait 1 seconds (Let the penguin escape first)

glide 1.5 secs to x: 0 y: -100 (Move to the Ice House)

say [I will shatter this ice house too!] for 3 seconds

broadcast [Blow Down Ice v]

3. Code for the Ice House Sprite:

when [Green Flag] clicked

show

when I receive [Blow Down Ice v]

hide

broadcast [Run to Igloo v]

Step 5: Scene 3 – The Igloo Stands Strong

Penguins 1 and 2 slide to the final, strongest house, and the Polar Bear finally fails!

1. Code for Penguin 1 and Penguin 2 (Sliding to Safety):

Select Penguin 1: when I receive [Run to Igloo v] -> glide 1 secs to x: 150 y: -100
(Move to the Igloo)

Select Penguin 2: when I receive [Run to Igloo v] -> glide 1 secs to x: 150 y: -100

2. Code for the Polar Bear (Defeated):

when I receive [Run to Igloo v]

wait 1 seconds

glide 1.5 secs to x: 150 y: -100 (Move to the Igloo)

say [I will blow this igloo... wait...] for 3 seconds

say [It's frozen solid! I am going home!] for 3 seconds

point in direction -90 (Face backwards)

glide 2 secs to x: -240 y: -100 (Run off screen)

hide

3. Code for the Igloo Sprite:

when [Green Flag] clicked

show

> Note for students: You do not need a hide block here because the sturdy igloo never falls down!