



Exploring the Universe with AI

Space Detective: Can You Spot a Star or a Galaxy?

Imagine you don't know what Skittles are. Your friend wants Skittles, and you have a pile of Halloween candy to look through. You lift up pieces of candy one by one, and your friend tells you whether each one is Skittles or not. After going through a chunk of the pile, you start being able to tell when you're holding Skittles.

YOUR OBSERVATIONS

1. When searching for Skittles, what textures should you look for?

2. When searching for Skittles, What colors and shapes should you look for?

3. When searching for Skittles, What kind of package should you look for?

Even after getting trained, sometimes you still make mistakes. Sometimes you pick up a pack of M&Ms, and believe they're Skittles. **This is how AI learns.**



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Observation Worksheet

Instructions:

Look closely at each image. Use the checkboxes to note what you see, and write down any extra details.

1. Brightness

- ☐ Very bright
- ☐ Medium
- ☐ Faint

2. Diffuseness

- ☐ Puffy or cloudy
- ☐ Well defined structure
- ☐ Patchy or mottled

3. Shape

- ☐ Tiny sharp point
- ☐ Slightly fuzzy
- ☐ Spikes (diffraction spikes)
- ☐ Spiral (like a pinwheel)
- ☐ Elliptical (round/oval, smooth)
- ☐ Irregular (messy, odd shape)

4. Features

- ☐ Bright center/core
- ☐ Spiral arms
- ☐ Bar across the middle
- ☐ Clumpy star-forming regions
- ☐ Smooth, even light

5. Signs of Activity

- ☐ Tidal tails (wispy streaks)
- ☐ Double/multiple cores (possible collision)
- ☐ Surrounded by many neighbors (cluster)

4. Additional Observations: