General Approach: (FOR STUDYING!)

1. Gather/record information (fact-find)

2. Brainstorm "What if" questions (anticipate test questions)
   • Change initial conditions
   • Change ecological rules
   • Change human/animal behavior

TODAY

3. Highlight information that relates to the what-if questions (possibility of more fact-finding)

4. Use that information to make/justify a prediction in response to what-if questions

1. Before European-American settlers came to the Willamette Valley, how did Native Americans influence the native vegetation in the valley? Why did the Native Americans do these things? (5 minutes)

Gather info:

They burned annually @ end of summer. To create prairie/open-woodlands — encourged growth of beneficial plants, made hunting easier.

Brainstorm "what if":

① What if the W.V. had been a dense oak forest prior to burning?

② What if fire encourged the growth of Douglas Fir?

③ What if deer preferred oak leaves to grass?

Highlight relevant info:

· Burning created prairie/open woodlands
· Burning facilitated hunting
· Fires were cool due to lack of fuel
· Douglas Fir outcompetes other trees
∘ Fires burned baby oaks

Use info to predict/justify. (pick 1)

Burning would continue because burnings promoted oak savanna which would provide food. However, the N.A.'s might burn less often or less area to avoid burning all the baby oaks.

What your test answer should look like! (Predictions that are justified.)

2

Describe the process by which coniferous forest communities now dominate so many areas that were previously occupied by prairie and oak savanna. (10 minutes)

· · · · Information already gathered:
   · Trees & shrubs come in to open areas over time (not burned)
   · Douglas Firs grow faster/taller
   · Oaks die eventually (lack of sun)
· · · · Brainstorm "What if?" Questions
   · What if there were no shrubs/trees (except oaks) anywhere near the Valley?
   · What if Douglas Firs grew fat but not tall?
   · What if deer/other animals ate Douglas Fir cones?
· · · · Highlight/find relevant information
   → No new plants (shrubs & trees) growing
   → Existing prairie vegetation?
   → Firs don't take over
   → Oaks don't die
· · · · Predict and justify:

Test answers will look like →

Prairies/oak savanna grasses & flowers would persist → no new trees & shrubs that take their sunlight. They would be less abundant → more oaks (babies aren't dying since there's no fire & old trees are getting sun since there are no firs). Overall: oak forest with grasses & flowers.