

QUEST EDUCATIONAL TREK ACTIVITY: a form of “questing”

OBJECTIVES

Students will be able to

- Explain the EdTrek theme in depth
- Draw a map of the EdTrek location and/or their community
- Create rhyming clues to report what they have learned about the EdTrek topic
- Work effectively in a small group

MATERIALS

Colored pencils
Glue sticks
Various art materials (for production session)
Detailed site maps
Clipboard for each student or pair of students
Research materials and/or access to the internet
Topographic map of your community
Sample EdTrek clues
Sample EdTrek map
Annotated EdTrek clues
Annotated EdTrek map
Reflecting on the EdTrek handout
Reflecting on the EdTrek Answer Key

TIME REQUIREMENT

You can take from a few days to a month to create an EdTrek. It all depends on your goals, the complexity of your theme and how thoroughly you want to explore your topic. You can modify each step and cover it in a single session or in a full week's worth of study and activities.

BACKGROUND

What Is an EdTrek?

An EdTrek, also known as a quest, is a **community treasure hunt** that guides people through—and teaches them how to see—a unique community treasure. This treasure might be a natural feature in the community (watershed, park or wetlands), a cultural site (oldest building, first gravestone) or perhaps the setting of a particular story (person's life, animal's home or industry's beginnings).

In general, EdTreks emphasize three things: (1) **mapping** the assets of our communities—our special places; (2) **teaching** about these places in an integrated, multisensory and experiential way; and (3) deepening **community interrelationships** between children and adults, schools and communities, newcomers and old-timers and across the community's various constituencies.

EdTrek topics depend on your theme. If you choose, you can span many disciplines, from science or social studies to language arts or service learning, and everything in between. The science standards that apply will be based on the chosen EdTrek theme.

Who Creates and Goes on EdTreks?

Anyone from individuals to groups can create a quest, including classrooms or scout troops working as a group or youth groups collaborating with adult community partners. EdTreks are suitable for all ages, elementary to adult.

Children, families and adults enjoy following the clues and searching for the hidden boxes. EdTreks are fun for tourists, family outings, children's birthday parties, daycare programs and educational field trips for schools and camps. Anyone can benefit and learn from an EdTrek.

What's in an EdTrek?

For each EdTrek, the participants create **verse clues** that guide and teach trekers as they move through a site; **maps** that illustrate the route and keep trekers from getting lost; and a **hidden treasure box** at the end that contains a scrapbook, a sign-in guest book and a unique hand-carved rubber stamp.

On the surface, an EdTrek seems fairly straightforward, but the rhyming clues, hand-drawn map and hidden treasure box are just the tip of the iceberg. Beneath the surface is a program that teaches about a community's landscape and heritage and fosters a sense of place.

Where Can I Find More Help?

This packet provides general guidelines for creating an EdTrek on any science or nature topic. EdTreks are also known as quests. More detailed information about questing can be found at www.valleyquest.org. A comprehensive nine-lesson unit for leading students through the process of creating a watershed-themed quest can be downloaded for free at www.pbs.org/oceanadventures/educators. These lessons can easily be modified to suit any EdTrek theme.



PROCEDURE

Follow these basic steps to create your EdTrek.

1. **Pre-assessment**

Find out what students know about the EdTrek topic. At the end of the unit, you can use these results as a baseline to assess what they have learned.

- a. Have students create a basic map that notes the shape and boundaries of their community, surrounding communities and key geological features.
- b. Ask the students questions about the EdTrek topic.

2. **Introducing EdTrek**

Introduce students to the “Sample Quest” so they can learn what a quest is, what its core components are and which products they will be responsible for creating.

- a. Ask students about a place that is special to them. Have some of them share their thoughts about that place.
- b. Read through the “Sample Quest” provided and/or go on a real or virtual EdTrek. Use the “Reflecting on the Quest” handout to help students focus on the content.
- c. Introduce the core components of an EdTrek using the “Annotated Quest”.
 - **EdTrek map** (site map including landmarks, compass rose and decorative border)
 - **Directions** to the starting point
 - **Title**
 - **Movement clues** that guide the visitor from one point to another
 - **Teaching clues** that help tell the particular story of that site
 - **Treasure box** that includes a sign-in book, project scrapbook or field guide, stamp pad and unique hand-carved stamp

Note: For some quests, especially those in a frequently visited urban environment, you might need to place the treasure box in a secure location (e.g., library). Another alternative is to not use a box but have a sign or plaque where the visitor can take a rubbing.
- d. Review the products that each participant will make. Everyone will contribute to a
 - Piece of the map (both a border element and a landmark)
 - Movement clue
 - Teaching clue
 - Treasure box and other products

3. **Making Maps**

Show students how to read and draw different types of maps and understand the different parts of a map.

- a. Introduce topographic maps, community maps and maps of the EdTrek site.
- b. Ask students to create their own maps of the community or quest site, complete with keys and compass roses.

4. **Exploring the Site and Topic**

Make sure your chosen EdTrek site will work for your topic.

- a. Visit the EdTrek site alone or with an expert before taking students to make sure it will work for your purposes.
 - Line up an expert or specialist to help provide students with content knowledge (optional).
 - Find an appropriate map of the EdTrek site.
- b. Take students to visit the quest site to develop a relationship with the site and collect data. Repeat this lesson as many times as desired, using different activities at the site. Some ideas include:
 - Sketching activity to begin each site visit
 - Locating landmarks on the site maps
 - Drawing various landmarks to use on the map
 - Developing a species list for your site
 - Focusing on and making observations about small plots of land at the site



5. **Reviewing the Site and Topic**

Have students review what they found at the EdTrek site and use the inhabitants, themes and areas to focus their story.

 - a. Discuss what students saw at the EdTrek site.
 - b. Help them construct a site map from memory, adding landmarks and geological features.
 - c. Review the EdTrek topic and discuss why your EdTrek will be located at this site.
 - d. Collaborate to establish the story or information your EdTrek will convey.
 - e. Determine the core elements of the EdTrek story and place marks on the EdTrek map where these elements could be taught.
 - f. Work together to develop the sequence of the EdTrek route.

6. **Determining Route and Movement Clues**

Guide students in deciding on the route that EdTrek visitors will take, creating clues to get visitors from one EdTrek stop to the next and sketching site icons and border strips. Once the EdTrek route has been established, groups of students will do the following:

 - a. Select the points on the route each group will be responsible for (i.e., one group works on the path from point A to point B, another group works on point B to point C, and so on)
 - b. Complete three products
 - Movement clue leading from their first point to their second point
 - Icon that will represent their first point on the EdTrek map
 - Border section that features some “teachable moment” on their site

7. **Conducting Research and Creating Teaching Clues**

Help students conduct further research on the EdTrek topic and site, decide what information is important to share with visitors and create teaching clues for the EdTrek.

 - a. In a large group, students finalize what they will teach on the EdTrek.
 - b. In small groups, students research individual teaching points and focus on the specific information they will include on the EdTrek.
 - c. Students turn their teaching point into verse.

8. **Production**

Students create all of the final components for their EdTrek.

 - a. Assign individual students or small groups to some of the different jobs, including the following:
 - **Artists** design the compass rose that indicates north and uses elements, details and themes of your EdTrek site.
 - **Poets** review the clue portions and work to improve flow, meter and rhyme so that the EdTrek fits together as a whole.
 - **Cartographers** create the treasure map using student border drawings, landmark drawings and other resources.
 - **Designers** come up with a publication format/design to best present your EdTrek.
 - **Archivists** come up with a system to organize and store digital photographs and other materials used to provide a clear record and resource for others.
 - **Guest-Book Makers** create a sign-in book and a replacement sign-in book.
 - **Field-Guide or Scrapbook Makers** use construction paper cut to the appropriate size to make a picture/resource book that contains more information about your EdTrek site.
 - **Stamp Carvers** carve a stamp for the EdTrek treasure box
 - **Thank-You Committee** writes thank-you letters acknowledging the contributions of the people who helped you with this project.

9. **Testing and Revision**

Return to the EdTrek site with students and volunteers to test the EdTrek. Students use their notes from this testing session to revise the quest, if necessary.

10. **Post-assessment (optional)**

Have students revisit the activities they have engaged in since the Pre-assessment to show what they have learned about their EdTrek topic.



“QUESTING” RESOURCES

EdTreks are a form of questing. Look in these resources for more information on questing and to find sample quests.

Questing: A Guide to Creating Community Treasure Hunts, by Delia Clark and Steven Glazer (Hanover, NH: University Press of New England, 2004).

Valley Quest: 89 Treasure Hunts in the Upper Valley (White River Junction, VT: Vital Communities, 2001).

Valley Quest II: 75 More Treasure Hunts in the Upper Valley (White River Junction, VT: Vital Communities, 2004).

CREDITS

The information contained here is a condensed version of “The Watershed Quest” curriculum unit created for KQED’s **Jean-Michel Cousteau: Ocean Adventures** educational outreach by Steven Glazer. He is the Valley Quest coordinator for Vital Communities, a regional nonprofit organization that works to engage citizens in community life and foster the long-term balance of cultural, economic, environmental and social well-being in the region.

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Special thanks go to the Presidio of San Francisco for hosting the training session where the sample “Quest for the Source” was created.

The Presidio is part of Golden Gate National Park and is a great outdoor classroom serving more than 10,000 Bay Area students and teachers each year. Award-winning, curriculum-based programs help K-12 students achieve academically, understand and address major environmental and cultural issues in their communities and the parks, as well as stimulate professional growth for teachers.



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Chabot Space and Science Center
www.chabotspace.org

East Bay Regional Park District
www.ebparks.org

Exploratorium
www.exploratorium.edu

Girl Scouts of San Francisco Bay Area
www.girlscoutsbayarea.org

Golden Gate National Parks Conservancy
www.parksconservancy.org

Lawrence Berkeley National Laboratory
www.lbl.gov

Lawrence Hall of Science
www.lawrencehallofscience.org

Oakland Zoo
www.oaklandzoo.org

The Tech Museum of Innovation
www.techmuseum.org

UC Berkeley Museum of Paleontology
www.ucmp.berkeley.org

OTHER WAYS TO PARTICIPATE IN QUEST



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kqed.org/quest



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KQED FM 88.5 & 89.3
Fridays at 6:30am and 8:30am



WATCH

KQED Channel 9 Tuesdays at 7:30pm

Major funding is provided by the National Science Foundation, the Gordon and Betty Moore Foundation, the Richard and Rhoda Goldman Foundation, and The Amgen Foundation. Additional support is provided by the William K. Bowes, Jr. Foundation, Ann S. Bowers -The Robert Noyce Trust, the Dirk and Charlene Kabcenell Foundation, and the Vadasz Family Foundation.



Quest for the Source: A Watershed Adventure

How to get there:

This Quest begins at the Crissy Field Center, 603 Mason Street, in the Presidio of San Francisco (415.561.7690). Head North on Van Ness Avenue; turn left onto Bay Street, and then right on Laguna to Marina Blvd. Follow Marina Blvd. past Marina Green, and bear right into the Presidio. You'll be on Mason Street, and Crissy Field Center is on the left, at the corner Halleck.

Follow the clues to find our treasure!

• **Begin this Quest at the Crissy Field Center**

Go straight down the steps.
Count 24 cracks.
Turn toward the Bay,
With a noisy freeway at your back.
Where wheelchairs can roll
You'll cross at the stripes.
Look both ways
To make sure the time is right!

A sandy path,
Lined with lupine?
We hope you wore a hat...
Cause these seagulls like poopin'!
Swing open "nature's gate"
And walk to the station.
Face the Golden Gate
And read the information.

1. So: What is a watershed?

There's lot of water out in the ocean.
But can you also find water up in the sky?
Water circles around in perpetual motion:
Liquid, vapor, raindrops, then life—oh my!
As the water moves across the land
It follows gravity's law, down, down
Collecting in streams and continuing on
Until at last, the ocean is once again found.

2. Where stream meets the sea

Quick! Turn around.
Spy a creek's outlet.
Here, fingerling fish
Feed a white Great Egret.
Hungry birds use
All of their stealth
To catch the saltwater fish
Who come here for their health.

Freshwater that flows
To this marsh from the springs...
Much food for this habitat
The detritus* brings.
** The stuff in water
That makes fish fatter
Is known by ecologists
As **detritus matter***

Freshwater in salt?
The **native** garden I see?
What is the source?
Who did all this for me?
Let's follow along
And walk the course
Following that **culvert** back up
To its freshwater source!

3. Quick, follow that culvert!

Head up the street, pass under the freeway
Stay on the sidewalk: concrete, stairs, & then wood.
"General Halleck" begins our Civil War theme
Have you found the president yet? Good!
There's a tall lovely palm tree
To the East, down the line.
Walk in that direction
Stopping at the "Fill Site" sign

4. Restoration: Day-lighting a buried stream

Fill removed, the volunteers gather.
Digging & planting...all are delighted
To see that this once filled-up stream
Has now been **day-lighted!**
Restoration project, **riparian** zone,
Meandering stream—all part of a system.
Supporting so much life—for so many a home—
So many seedlings, you can't even count them.
** Volunteers planted 40,000 here in late 2005.*



5. Impediment to water flow: pavement

Pass historic palm number 1618.
Go across the street to your right.
In the parking lot straight ahead
Look for trees, in asphalt bound tight.
(How do you think that feels?)
Continue past the call box
Follow the sidewalk where the arrow bears right
Keep going and you will find it.
Move with the cars, the stop sign's in sight.

6. Other forces affecting the water's flow

A carved "bowl" to the right has a bottom of dirt.
Invasive clover is all around.
New plantings are close to your feet—
Not native, but meant to beautify the ground
Southwest down Presidio Boulevard
Past all kinds of manhole covers, you can see.
Slowly count these metal covers up to 6
Then on your right a Cyprus grove will be.

7. Signs of our stream

Look at this cluster of all types of trees.
They must have water in order to grow!
This grove is a clue to our mystery
And though you can't see it, water's there below.
A hidden path lies just out of sight
Uphill past 2 lamp posts
Cross to the left—not to the right.
Stroll down toward the historic brick bridge
Down "Lovers' Lane" to blackberry bramble
Soldiers once walked here on their trips downtown
Careful, it's steep, so don't run—just ramble.

8. Our stream surfaces again!

Eucalyptus and berries, both placed here by man:
Non-natives are thriving, so what do we think?
Invasives grow here with no competition...
So easy to grow with plenty to drink!
Through a concrete **channel** the stream emerges
This creek can't meander as it might be wishing
Blocked by the army's concrete and bricks
Insects that prove good creek health are missing.

9. A beautiful day in the neighborhood

Walk toward the street and stay on the sidewalk
Turn right at the tall Monterey Cypress tree.
As you stroll down MacArthur, notice
Grates on your left, and right our sweet stream.

10. Hey! Where'd the stream go?

Keep on: turn left at two palms and a cypress
Walk up the street past five telephone poles.
At the sidewalk's end you will cross the street
To a **storm drain** that receives the stream's flow.

Take a rubbing of the manhole cover near the stream. And the word on the cover?

11. Nearing the source

Stay on the path, bearing left, across wet cobbles.
See the stream meander through grass so green.
Cross a trickle once more, then ears open
For the gurgling sound of El Polin Spring.
Here, rainfall drains through sand dunes both young and ancient,
Then slows at the rock layer hidden underneath.
Water seeps through Serpentine fractures and cracks
To emerge from the ground anew as a spring.

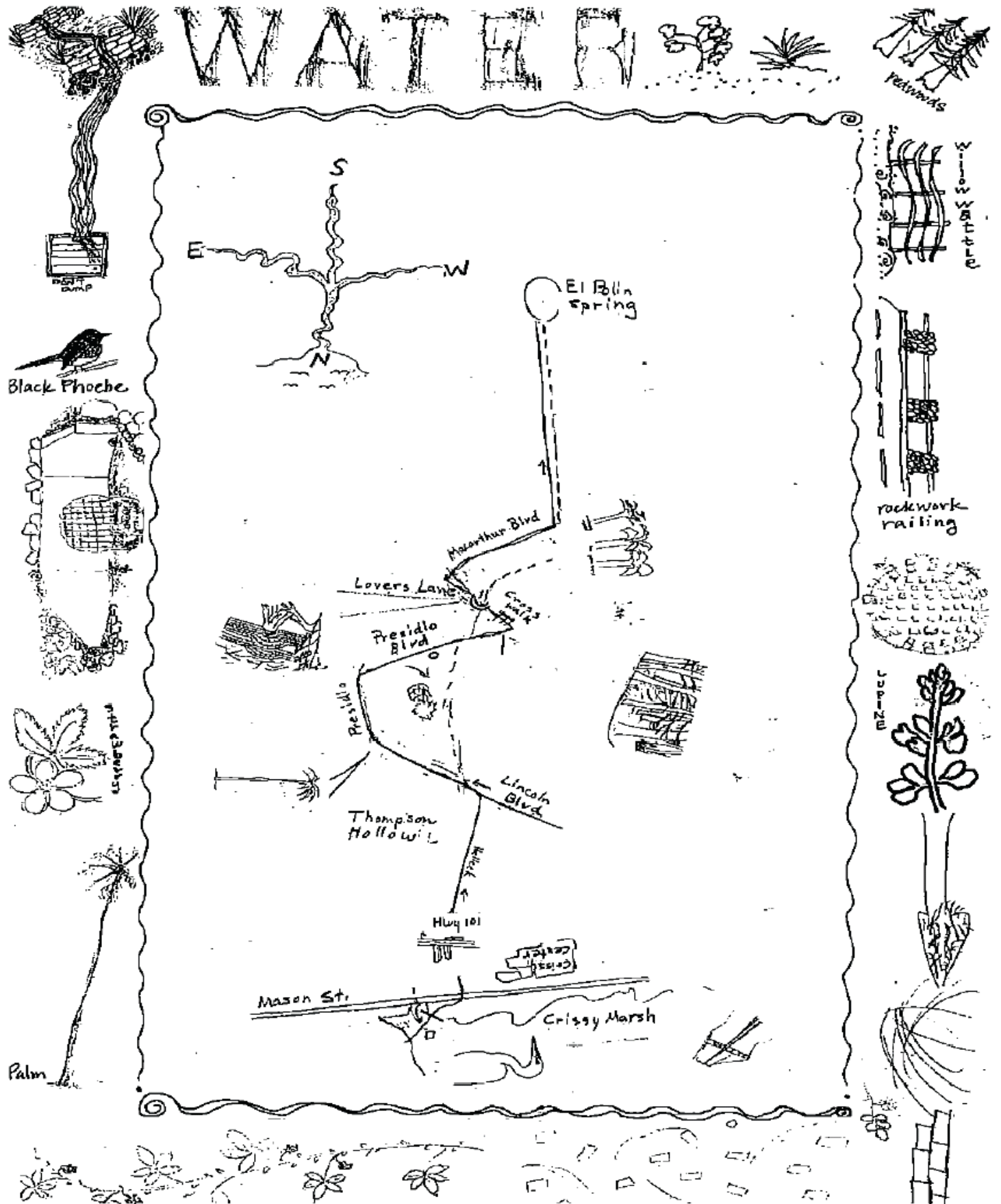
12. El Polin Spring

Drinking this water will yield lots of kids
Ohlone peoples and Spaniards believed.
In the 1800s the flowing stream
Helped the Army's thirst to be relieved.
Now El Polin Spring's mystical water
Runs through a trash dump uphill from this site.
But it's slurped by wax myrtle trees, sedges,
And Black Phoebes before they take flight.

**You've walked our EdTrek from sea to source,
& explored a watershed as a matter of course!
If you peek behind the interpretive sign,
You're EdTrek will be done...it's party time!**



SAMPLE EDTREK MAP





ANNOTATED EDTREK CLUES

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Directions

Follow the clues to find our treasure!

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Go straight down the steps.
Count 24 cracks.
Turn toward the Bay,
With a noisy freeway at your back.
Where wheelchairs can roll
You'll cross at the stripes.
Look both ways
To make sure the time is right!

Movement Clue

Freshwater in salt?
The **native** garden I see?
What is the source?
Who did all this for me?
Let's follow along
And walk the course
Following that **culvert** back up
To its freshwater source!

Teaching Clue

A sandy path,
Lined with lupine?
We hope you wore a hat...
Cause these seagulls like poopin'!
Swing open "nature's gate"
And walk to the station.
Face the Golden Gate
And read the information.

Movement Clue

3. Quick, follow that culvert!
Head up the street, pass under the freeway
Stay on the sidewalk: concrete, stairs, & then wood.
"General Halleck" begins our Civil War theme
Have you found the president yet? Good!
There's a tall lovely palm tree
To the East, down the line.
Walk in that direction
Stopping at the "Fill Site" sign

Movement Clue

1. So: What is a watershed?
There's lots of water out in the ocean.
But can you also find water up in the sky?
Water circles around in perpetual motion:
Liquid, vapor, raindrops, then life—oh my!
As the water moves across the land
It follows gravity's law, down, down
Collecting in streams and continuing on
Until at last, the ocean is once again found.

Teaching Clue

4. Restoration: Day-lighting a buried stream
Fill removed, the volunteers gather.
Digging & planting...all are delighted
To see that this once filled-up stream
Has now been **day-lighted!**
Restoration project, **riparian** zone,
Meandering stream—all part of a system.
Supporting so much life—for so many a home—
So many seedlings, you can't even count them.
* *Volunteers helped plant 40,000 here in the winter of 2006*

Teaching Clue

2. Where stream meets the sea
Quick! Turn around.
Spy a creek's outlet.
Here, fingerling fish
Feed a white Great Egret.
Hungry birds use
All of their stealth
To catch the saltwater fish
Who come here for their health.

Teaching Clue

5. Impediment to water flow: pavement
Pass historic palm number 1618.
Go across the street to your right.
In the parking lot straight ahead
Look for trees, in asphalt bound tight.
(How do you think that feels?)
Continue past the call box
Follow the sidewalk where the arrow bears right
Keep going and you will find it.
Move with the cars, the stop sign's in sight.

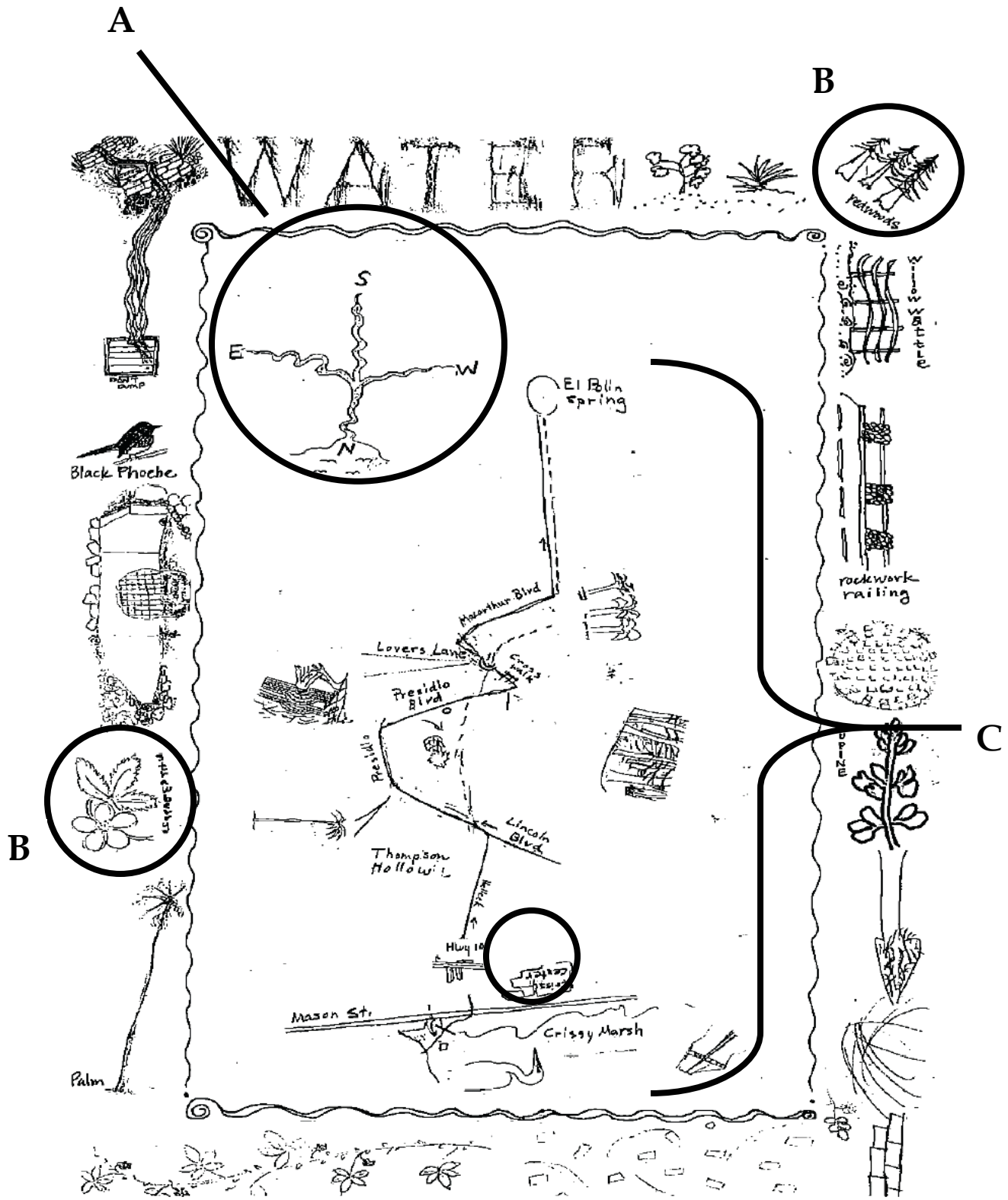
Movement Clue

Freshwater that flows
To this marsh from the springs...
Much food for this habitat
The detritus* brings.
* *Decaying plant matter
That makes fish fatter*

Teaching Clue



ANNOTATED EDTREK MAP



KEY

- A Compass Rose
- B Border element
- C Site Map
- D Landmark



REFLECTING ON THE EDTREK

1. Where does this quest begin? _____
2. What is the source of this particular watershed? _____
3. What is the ultimate destination of this watershed? _____
4. Using your own words, describe how water "circles around in perpetual motion."

5. Name three native inhabitants of this watershed:
 - a) _____
 - b) _____
 - c) _____
6. Name three nonnative invasive species in this watershed:
 - a) _____
 - b) _____
 - c) _____
7. What are two ways that people have positively impacted this watershed?
 - a) _____
 - b) _____
8. What are two ways that people have, perhaps, negatively impacted the watershed?
 - a) _____
 - b) _____
9. Name three groups of people that have inhabited this watershed over time.
 - a) _____
 - b) _____
 - c) _____



REFLECTING ON THE EDTREK – ANSWER KEY

1. Where does this quest begin? Crissy Field Center
2. What is the source of this particular watershed? El Polin Spring
3. What is this ultimate destination of this watershed? San Francisco Bay / Pacific Ocean
4. Using your own words, describe how water "circles round in perpetual motion."
(4 points)
Ocean water evaporates → forms clouds → condenses → precipitation → rainwater falls → percolates into ground, rises up in springs; or gathers into streams, rivers, lakes → oceans
5. Name three native inhabitants of this watershed. (3 points)
 - a) Great egret
 - b) Monterey cypress
 - c) Black phoebeAlso: Redwoods, strawberries, lupines, seagulls, wax myrtles, palms
6. Name three nonnative invasive species in this watershed. (3 points)
 - a) Blackberries
 - b) Eucalyptus
 - c) Clover
7. What are two ways that people have positively impacted this watershed?
(2 points)
 - a) Daylighting the stream
 - b) Planting 40,000 seedlings
8. What are two ways that people have, perhaps, negatively impacted the watershed? (2 points)
 - a) "trees in asphalt bound tight"
 - b) concrete channel
9. Name three groups of people that have inhabited this watershed over time.
(3 points)
 - a) Ohlone
 - b) Spaniards
 - c) U.S. Army