State scientists look to purge invasive goldfish from Maine waters

October 2, 2012

ELLSWORTH, Maine — The little orange fish are a staple in home aquariums and Asian restaurants. They are a rite of passage for young children, who receive them as a test-run for bigger, furrier pets.

But goldfish also are an invasive species and a risk to Maine’s indigenous fishes, said a state biologist Tuesday. The Maine Department of Inland Fisheries and Wildlife is responsible for enforcing a state law banning goldfish from outdoor bodies of water.

Greg Burr is a regional fisheries biologist for the DIF&W. He and a small crew were at Birdscare Stanwood Wildlife Sanctuary in Ellsworth on Tuesday. There, a small pond is overrun with goldfish, he said, some of them up to a foot long.

It’s unclear how the fish got there, Burr said, but he knows they were placed by human hands. Despite the common name “goldfish,” the Carassius auratus auratus is not always the familiar golden color. They’re often brown or even black, Burr said, and are mistakenly identified as carp or sunfish.

Because they’re so easily misidentified, goldfish outside of aquariums are sometimes moved by anglers who trap them for live bait. The mistake proliferates the species.

The goldfish is a domesticated version of the Prussian carp. Keeping them outdoors is illegal because their escape could lead to ballooning goldfish populations in Maine’s rivers, streams, ponds and lakes.
What are the challenges for readers?
Students need to know 95% of words to have comprehension.
Strategies:

- Explicitly Teach Tier 2 Vocabulary
- Front-load Background Knowledge
- Use Language Strategically
Key Vocabulary for Metamorphosis Unit

Content Concepts

Key Vocabulary
- Content words (Tier 3)
- Academic word list words (Tier 2) and process/function words
- Words that teach English structure
- Common words (Tier 1)

Life Cycles
Metamorphosis
Monarch butterfly
egg, larva, caterpillar, pupa, adult
observe / observation
record, document
first, second, then, next, finally
cycle (bicycle, recycle)
butterfly, wings, change, circle

Session 4: Building Background – Slide 19
Strategy - Word Sorts
<table>
<thead>
<tr>
<th>Word</th>
<th>Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hubble Space Telescope</td>
<td>solar system</td>
<td>galaxy</td>
</tr>
<tr>
<td>Super Nova</td>
<td>Seasons</td>
<td>orbit</td>
</tr>
<tr>
<td>Black hole</td>
<td>Stellar Nebula</td>
<td>Waning Moon</td>
</tr>
<tr>
<td>neutron star</td>
<td>solar eclipse</td>
<td>Waxing Moon</td>
</tr>
<tr>
<td>white dwarf</td>
<td>The Big Bang Theory</td>
<td>Telescope</td>
</tr>
<tr>
<td>Sirius</td>
<td>Atmosphere</td>
<td>Uranus</td>
</tr>
<tr>
<td>Mars</td>
<td>Planetary Nebula</td>
<td>gravity</td>
</tr>
<tr>
<td>Jupiter</td>
<td>lunar eclipse</td>
<td>astronaut</td>
</tr>
<tr>
<td>Pluto</td>
<td>lightyear</td>
<td>NASA</td>
</tr>
<tr>
<td>The Sun</td>
<td>gibbous moon</td>
<td>The Milky Way</td>
</tr>
<tr>
<td>The Moon</td>
<td>satellite</td>
<td>Orion</td>
</tr>
<tr>
<td>Leo the Lion</td>
<td>crescent moon</td>
<td>quarter moon</td>
</tr>
<tr>
<td>massive star</td>
<td>Neptune</td>
<td>Mercury</td>
</tr>
<tr>
<td>full moon</td>
<td>Venus</td>
<td>Red Giant</td>
</tr>
<tr>
<td>Constellation</td>
<td>Earth</td>
<td>I.S.S.</td>
</tr>
</tbody>
</table>
Category 1: Solar System

- Neptune
- Venus
- Mars
- The Moon
- Earth
- Uranus

Category 2: Moon Phases

- Crescent moon
- Gibbous moon
- Solar eclipse
- Waxing moon
- Waning moon
- Quarter moon
- Lunar eclipse
- Full moon
<table>
<thead>
<tr>
<th>rain</th>
<th>frost</th>
<th>cloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>sweat</td>
<td>ice</td>
<td>groundwater</td>
</tr>
<tr>
<td>pond</td>
<td>dew</td>
<td>Casco Bay</td>
</tr>
<tr>
<td>river</td>
<td>iceberg</td>
<td>lake</td>
</tr>
<tr>
<td>saliva</td>
<td>watershed</td>
<td>puddle</td>
</tr>
<tr>
<td>glacier</td>
<td>mountain</td>
<td>ocean</td>
</tr>
<tr>
<td>valley</td>
<td>solid</td>
<td>hail</td>
</tr>
<tr>
<td>runoff</td>
<td>liquid</td>
<td>water vapor</td>
</tr>
<tr>
<td>snow</td>
<td>gas</td>
<td>precipitation</td>
</tr>
<tr>
<td>fog</td>
<td>The Sun</td>
<td>condensation</td>
</tr>
<tr>
<td>steam</td>
<td>soil</td>
<td>evaporation</td>
</tr>
</tbody>
</table>
Word sorts:

- Provide Comprehensible Input - Connects to student’s schema and anchors learning to prior knowledge
- Uses discussion to support the acquisition of academic language
- Each student is accountable yet able to work at their own level
Research-based best practices...

ACADEMIC LANGUAGE

ORAL INTERACTION

COMPREHENSIBLE INPUT

(and build background knowledge)
Strategy - Group Writing
Students carry out an independent investigation:
9. Where would you expect to find the most contaminated water in this area? Why?

10. Do you think it is possible for pollution from Sebago lake to get into Casco Bay? Explain.

12. If you were in charge of building a new sewage treatment plant, where do you think the best location for it would be on this map? Remember, it needs to eventually empty into a large body of water and be close to where a lot of people live.
Students work in small group to write responses:

3. Looking at the entire Presumpscot River watershed, we expect to find the cleanest water ____________________________________________

because ________________________________________________________

________________________________________________________________

Another reason is ________________________________________________

________________________________________________________________

Writer: ________________

A writer is assigned for each question, they write the notes of what the whole group says.

4. Looking at the entire Presumpscot River watershed, we expect to find the most contaminated water ____________________________________________

because ________________________________________________________

________________________________________________________________

Another reason is ________________________________________________
**Gravity** – Each group member will take a turn writing the response. ALL group members are responsible for deciding what to write.

People often say that there is no gravity in space. Explain why this is not accurate.

It is not accurate to say that there is no gravity in space because any thing with atoms has mass and mass has gravity, the greater the mass the greater the gravitational force.

Wha-ho.

For example, Ryan has mass so he has a gravitational force, however Ryan’s gravity is not very attractive compared to earth’s gravity.
For example, The sun has gravity and that's why the planets orbit the sun. That's why humans can't float around. And the sun has the most mass resulting in the most gravity.

Another example of why it is not accurate to say there is no gravity in space is that if Ms. Lea left me alone in space with scissors then the scissors because they are smaller than me, would eventually flote to me. It will take an extremely long time.
Group Writing

- Builds on student writing abilities using a formal “Think/Pair/Share”
- Uses discussion to support the acquisition of academic language and science content
- Each student is accountable yet able to work at their own level
Research-based best practices...

Academic Language
Oral Interaction
Comprehensible Input
Introduction to ELLs and content-area instruction
ETEP, USM, January 2015

Presenter: Robin Lea
Lincoln Middle School, Portland, Maine
learner@portlandschools.org

RESOURCES:

WIDA CAN DO Descriptors, Pre-K to 12
http://www.wida.us/standards/can_dos/index.aspx

Migration Policy Institute Report: Limited English Proficient Individuals in the United States
http://www.migrationpolicy.org/research/limited-english-proficient-individuals-united-states-number-share-growth-and-linguistic


Academic Word Lists
Questions?
ELL Endorsement

5 Courses (15 credits) + ESOL Praxis II = 660 K-12 ELL endorsement (Maine DOE)

Total Required Credits: 15

- EDU 557 Teaching Writing to Multilingual Learners or
- EDU 558 Content Based Curriculum for English Language Learners
- EDU 559 Aspects of Reading for Multilingual Learners
- EDU 561 Aspects of the English Language
- EDU 562 Linguistic and Cultural Diversity
- EDU 563 ESL Testing and Assessment

For course descriptions, please click here: http://usm.maine.edu/sehd
<table>
<thead>
<tr>
<th>Welcome</th>
<th>ESL Endorsement</th>
<th>Scholarship</th>
<th>Prof Development</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>About Us</td>
<td>Course Descriptions</td>
<td>Pre-Service Information</td>
<td>Latest News</td>
<td>Facebook</td>
</tr>
<tr>
<td>The Staff</td>
<td>Minor and Specialization</td>
<td>Pre-Service Application</td>
<td>Calendar</td>
<td>Web Links</td>
</tr>
<tr>
<td>FAQs</td>
<td>Endorsement Eligibility</td>
<td>In-Service Information</td>
<td>Project Sponsored</td>
<td>Culture Bulletins</td>
</tr>
<tr>
<td>Directions</td>
<td>Praxis II Information</td>
<td>In-Service Application</td>
<td>School Districts</td>
<td>Lending Library</td>
</tr>
<tr>
<td>Contact Us</td>
<td>Spring 2015 Course</td>
<td>Deadlines and Review</td>
<td></td>
<td>ESL Go-to-Chart</td>
</tr>
</tbody>
</table>
HANNAFORD TEACHER RENEWAL SCHOLARSHIP

The Hannaford Teacher Renewal Scholarship Fund was established in the University of Maine System in 1990 by a gift from the Hannaford Brothers Corporation, and expanded in 2001. The income from the fund is used for two Hannaford Scholarship Programs, the Hannaford Scholar and the Hannaford Scholar Leader.

Applicants for both programs must be currently practicing, certified (including transitional and conditional) teachers in K-12 classrooms in Maine, with significant teaching responsibilities in the areas of mathematics, science or foreign language.

Selection of recipients will be made by representatives of the University of Maine System, and will be based upon quality of application, relevance of proposed coursework to teaching responsibilities in math, science or foreign language, and potential for enhanced teaching effectiveness as a result of course completion.

In the case of the Hannaford Scholar Leader, the feasibility and potential impact of proposed leadership activities will be considered as well. In choosing between candidates of similar qualifications, first-time applications will be given preference.

Application Materials
Scholarship Application Packet (PDF – 131 KB) - includes applications for both Hannaford Scholar and Hannaford Scholar Leader programs, recommendation forms and expenditure forms.
Wondering whether you can get your federal student loans forgiven or canceled for your service as a teacher?

Learn about the forgiveness and cancellation programs to see whether you qualify.

There are two types of loan forgiveness programs for teachers:

- **Teacher loan forgiveness** for Direct Subsidized Loans, Direct Unsubsidized Loans, Subsidized Federal Stafford Loans, and Unsubsidized Federal Stafford Loans
- **Teacher cancellation** for Federal Perkins Loans

**Teacher Loan Forgiveness**

The Teacher Loan Forgiveness Program is intended to encourage individuals to enter and continue in the teaching profession. Under this program, if you teach full-time for five complete and consecutive academic years in certain elementary and secondary schools and educational service agencies that serve low-income families, and meet other qualifications, you may be eligible for forgiveness of up to a combined total of $17,500 on your **Direct Subsidized and Unsubsidized Loans**.

**Glossary**

**Loan Forgiveness**

The cancellation of all or some portion of your remaining federal student loan balance. If your loan is forgiven, you are no longer responsible for repaying that remaining portion of the loan. ...

**Federal Family Education Loan (FFEL) Program**

Under this program, private lenders provided loans to...
Go to kahoot.it