

**Deriving UDL Solutions**

**Model Template**

**Grade:** 3

**Teacher:** Mrs. G.

**Subject:** Science

**Standard:** 6.23—Plants lifecycle

**Goal:** *Research and present information on a flower.*

<b>Materials &amp; Methods</b>	<b>Potential Barriers/ Missed Opportunities</b>	<b>UDL Solutions</b>
Printed textbook	<i>Kevin</i> —Difficulty seeing small text <i>Bill</i> —Doesn't tap his graphics skills <i>Brian</i> —Difficulty decoding/understanding word meaning	Electronic text with text-to-speech to read aloud CD-ROM or online encyclopedia; Web page with collections of images Spanish CD-ROM on flowers; link to Spanish Web site
Lecture/whole class presentation	<i>Jose</i> —Difficulty comprehending meaning <i>Helen</i> —Distracted, may miss info <i>Kiwa</i> —Distracted, may miss info	Provide Spanish/English key terms translations with text-to-speech Provide Inspiration concept map of key ideas; eText outline with text to speech that students can access
Library research	<i>Brian</i> —May have trouble keeping track. <i>Kiwa</i> —May not be able to abstract the project's important content.	Partially filled-in outlines; Web page with attached resources; collection of online resources, online or CD-ROM encyclopedia, linked to Inspiration outline of key project parts
Create written report	<i>Sarita</i> —Mechanics-based difficulty expressing her ideas <i>Jake</i> —Format doesn't tap artistic talent	Word processor with spell check; talking word processor  Graphics program—Kid Pix
Flower drawing	<i>Phillip</i> —Drawing will be physically difficulty.	Word processing; selection of graphics to use in report
Oral report on flower	<i>Jorge</i> —Format doesn't tap musical talent <i>Brian</i> —May be intimidated	Provide option of live or recorded music as part of demonstration Pair Brian with James, who can support him while working
Independent project	<i>James</i> —Context won't draw on his leadership and collaboration skills. <i>Helen</i> —Could have difficulty working alone. <i>Elizabeth</i> —Deep knowledge of plants	Encourage James to support other students as they work  Be sure to find aspect of project of particular interest to Helen and check in frequently. Support presentation with notes Pair Elizabeth with Jose to share her knowledge and enthusiasm

## Examples of UDL Solutions

### Recognition Networks

#### Multiple Examples

Multiple versions of story, math process, content  
Multimedia collections  
Images  
Sounds  
Text  
Video/animation  
Concept maps  
Links to online examples from Web page  
Multimedia concept map with online/local links  
Animation of text meaning (software, Web)

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#### Highlight Critical Features

Visual concept maps (Inspiration)  
Multimedia templates (Hyperstudio, PowerPoint)  
Color highlighting in word processing  
Graphic highlighting (circles, arrows, boxes)  
Links to animations showing key elements  
Software offering different presentations  
E-text outline, main points (with text-to-speech translation)

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#### Multiple Media and Formats

Multimedia glossary, online, CD-ROM or teacher-made  
Alternative representations across media:  
E-text with text-to-speech  
Text and audio descriptions for still images  
Spoken descriptions for video images  
Tactile graphics  
Voice recognition—convert to text  
Image collections in concept maps  
Text outline, highlighting key concepts  
Digital photographs from field trips or home  
Recorded, digitized sounds and stories  
Adjustable font size, color, background color  
Adjustable digital images (e.g., maps)

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#### Support Background Knowledge

Web pages with links to related information  
Links to author information  
Key vocabulary (image map, hyperlinks to words)  
Translation to other languages (online tools)  
Expansion of information—build multimedia collections  
Online links to experts  
Multimedia glossary, encyclopedia

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## Strategic Networks

### Models of Skilled Performance

- Product models—finished versions of target skill
- Process models—showing process steps
- Collections of completed products  
(Web links/local)
  - Past student work
  - Work of experts
  - Teacher generated examples
  - Students in other settings
- Multimedia collections—stories, facts, information
- Online links to work of experts

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### Ongoing Relevant Feedback

- Digital voice record, play back
- Text-to-speech while writing
- Links to online mentors
- Links to peers/editors (e.g., [www.stonesoup.com](http://www.stonesoup.com))
- Digital portfolio—review and compare
- Prompts to self-reflect, record reflections
- Online publishing, local network or Internet
- Digital graphing of progress

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### Practice with Supports

- Talking word processor (e.g., Write Out Loud)
- Templates to structure work as appropriate
- Scaffolds, use depending on goal:
  - Spell check, grammar check
  - Built-in calculator
  - Clip media (all sorts), student projects
  - Text-to-speech for content reading
- Graphic organizers (e.g., Inspiration)
- Hyperstudio story or presentation template
- Chapter-end answers partially structured

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### Demonstration of Skills

- Multimedia presentation tools (Hyperstudio, PowerPoint)
- Web-capable graphic organizers (Inspiration)
- Publishing software (Hyperstudio, Pagemaker)
- Web site design tools (Home Page, Dreamweaver)
- Multimedia recording, image digitizing, digital cameras
- Media banks—images, sounds, animations, video
- Digital recording
- Draw tools

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## **Affective Networks**

### **Choice of Content and Tools**

- Selections of content for learning skills and strategies
- Web sites with supplementary, related activities
- Multimedia presentation and composition tools
- Digital cameras, recording devices
- Web page with content options and choices
- Selection of stories/non fiction for learning to read
- Tie activities to student's deep subject interests

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### **Choice of Rewards**

- Individualized feedback to support student needs
- Explicit feedback specific to student progress
- Minimal extrinsic "rewards" not tied to work
- Build student self-monitoring
- Feedback related to explicit student goals
- Opportunities for demonstrations
- Built-in structured peer feedback

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### **Adjustable Support and Challenge**

- Software/Web sites offering management systems
- Optional scaffolds (– teacher/student discretion)
- Templates supporting process
- Templates supporting content
- Choice of level, same activity or goal
- Optional help (student or teacher discretion)

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### **Choice of Learning Context**

- "Web quest" designs, with varied structure
- Software/Web sites, options for feedback and support
- Flexible work groups—pairs, small groups, individual
- Templates with optional structure and support
- Earphones
- Embedded hyperlinks, used at student option
- Student choice of sources

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### Deriving UDL Solutions

### Blank Template

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**Teacher:**

**Subject:**

**Standard:**

**Goal:**

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