

Index of Video Clips and Animations Used

First Days of School for both Biology and Physical Science

“Futurama” – 1:46 – used as an attention getter first day of school during introductions

Synopsis: parody of “Willy Wonka and the Chocolate Factory,” moral of Oompa Loompas’ song is to ask questions in school to learn

“CSI” – 1:25 – used as an introduction to science

Synopsis: demonstration of experiment by pushing dummies off rooftops to “see” what happens

“CSI” – 0:55 and 0:25 – used with safety notes

Synopsis: lab workers using heat, glassware, and chemicals while wearing and not wearing goggles

“CSI” – 0:56 – used with safety notes

Synopsis: victim committed suicide by drinking cleaning solvent containing chemical – hydrogen fluoride

“Lemony Snickets: Series of Unfortunate Events” – 1:04 – used with notes on lab reports

Synopsis: guardian of the children finds grammar to be the most important thing in the world

“National Treasure” – 0:17 – used with notes on lab reports

Synopsis: Ben Franklin tried and failed 2000 times to make a light bulb but he considered them not failures by 2000 ways not to make a light bulb

Biology specific

“Princess Bride” – 0:56 – used with notes on entomology and death

Synopsis: the magical healer discusses the difference between “mostly dead” and “all dead”

“Boundin” from “The Incredibles” – 0:42 – used with notes on classification

Synopsis: discusses species in the Southwest, including the jackalope, to show students diversity of animals and some mythical characters to classify

“Jungle Book” – 1:21 – used with notes on food webs

Synopsis: vultures sitting on a tree branch discussing the happenings of the jungle

“Finding Nemo” – 1:23 – used with notes on biomes

Synopsis: Dori and Marlin lose the mask in the depths; shows photic and aphotic zones

“Ice Age” – 1:04 – used with notes on biomes

Synopsis: walking through ice caves, students since prehistoric creatures frozen in snow – preservation of extinct animals

“24” – 1:10 – used with notes on biomes

Synopsis: discussing the impact of a nuclear bomb on the environment (keystone species, habitats, etc)

“Evolution” – 1:17 – used with notes on enzymes

Synopsis: uses term “catalyst” incorrectly when describing a reaction

Clip from laser disc on enzymes – 0:31 – used with notes on enzymes

Synopsis: demonstrates lock-and-key design of enzymes and binding sites with substrates

“Evolution” – 0:40 – used with notes on microscopes

Synopsis: shows incorrect use of microscope with focus adjustments and wet mount slides

Clip from laser disc on plasma membrane and transport – 2:54 – used with notes on plasma membrane and cellular transport

“Wizard of Oz” – 1:20 – used with notes on photosynthesis

Synopsis: Dorothy and the Scarecrow try to pick apples from talking trees; used as an introduction

Clip from laser disc – 2:54 – used with notes on cellular growth

Synopsis: demonstrates need for small cells sizes by looking at surface area and volume

“Evolution” – 1:40 – used with notes on mitosis

Synopsis: shows one example of mitosis, and two examples of incorrectly-termed mitosis

Two animations from Cell’s Alive – www.cellsalive.com – used with notes on mitosis

Synopsis: shows cell cycle through interphase and mitosis

Animation from <http://www.csuchico.edu/~jbell/Biol207/animations/meiosis.html> - used with notes on meiosis

Five animations from John Kyrk – www.johnkyrk.com – used with notes on DNA structure, DNA replication, transcription and translation

“Evolution” – series of clips – used with history of the earth notes

Synopsis: shows timeline of evolution of alien species from single cells to ape-like creatures, compared to Earth’s history and timeline

Zoloft commercial from www.youtube.com – used with notes on nervous system and synapses

Synopsis: shows neurotransmitters moving across synapse and explains how anti-depression medications work

Physical Science specific

“Robots” – 0:40 – used with notes on forces and friction

Synopsis: Rodney loses friction when marbles drop on the floor where he is walking

Animation from www.animationfactory.com – used with notes on forces

Synopsis: shows a tennis player hitting a ball, demonstrates force causing acceleration on an object

“Lord of the Rings: The Two Towers” – 1:43 – used with notes on simple machines

Synopsis: attack on Minas Tirith and use of catapults and trebuchets (a form of lever)

“LOTR: The Two Towers” documentary – 1:42 – used with notes on simple machines

Synopsis: creator of miniature trebuchets and catapults discuss their uses throughout history

“Robots” – 3:17 – used with notes on simple machines and Rube Goldberg

Synopsis: Rodney on the Crosstown Express, demonstrates a Rube Goldberg device

Animation from Honda commercial – used with notes on Rube Goldberg

Synopsis: Honda commercial with amazing Rube Goldberg device

“Lemony Snicket’s” – 1:06 – used with notes on Rube Goldberg

Synopsis: Violet Baudelaire is an inventor and invents a Rube Goldberg device

“Robots” – 1:30 – used with notes on magnetism

Synopsis: Rodney becomes magnetized, shows the effect of magnetism on metal objects

Flash animation from www.dlt.ncssm.edu – used with notes on solutions

Synopsis: demonstrates how a substance dissolves into solution

“Evolution” – 1:30 – used with notes on naming compounds

Synopsis: Selenium is a chemical needed and is found in dandruff shampoo, shows how chemicals are used in everyday products

Five animations from Chemistry Comes Alive – used with notes on chemical reactions

Synopsis: demonstrates single displacement and double displacement reactions