MAGUS MUNDUS

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PROBLEM SPACE

Retention,Recall of Scientific Names

Understanding the value of endangered species

AGE 12-15 years

fanasy, games, fiction, cartoon

Realising Indian cultural traditions in form of usage of natural resources

Understanding and developing social responsibility

LEARNING OBJECTIVES

Disease causing microbes

Source of microbes
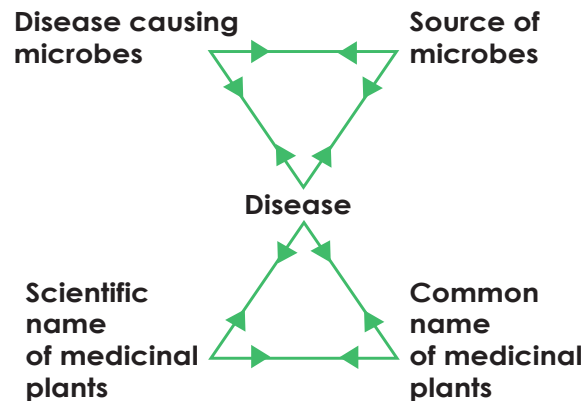
Disease

Scientific name of medicinal plants

Common name of medicinal plants

▶ To create factual knowledge associations in memory as above and thereby realising medicinal properties of plants and associated Indian cultural and traditional values.

▶ To develop understanding of the significance of conservation of endangered plants.

▶ To develop resource management and decision making skills.

▶ To instill a sense of social responsibility in the player.

▶ To develop an affinity towards natural resources.

GAME

Magus Mundus is a 3D game where the player takes the form of a young wizard called Magus in the magical world - Mundus where his goal is to rescue his father from the wicked clutches of the evil witch Serpentina and her 3 daughters, and heal the people plagued by various kinds of diseases in his journey.

In the process, he has to safeguard the rare plants in his environment from the witches. Solving puzzles with the help of the magical cat Felix, the player goes on a valiant quest where the knowledge about the plants in the environment takes him closer to his ultimate goal.

EDUCATIONAL ELEMENTS

NAVARATNAS
▶ Endangered plants and their value
▶ Concept of conservation

STASH
▶ Encourages learning of species name
▶ Immediate feedback
▶ Reduces cognitive load

SPELL
▶ Scientific name of plants
▶ Key to cure diseases and other puzzles

PLANT PICKING
▶ Penalty for incorrect choice
▶ Use of common name to collect the plant
▶ Explore natural environment

WITCH
▶ Revision of used plants within level
▶ Killing of witch by either using mouse or typing the scientific or common name to inflict greater damage

INVENTORY
▶ Differentiating plants based on functions
▶ Interpreting multiple cures to a disease

COINS
▶ Resource management
▶ Rewarding mechanism
▶ Instant feedback

CAT
▶ Constant companion
▶ Provides hints
▶ Reduces extraneous info

ENGAGING ELEMENTS

SENSATION: 3D immersive environment with music

FANTASY: Magical world fascinates the player

NARRATIVE: Captivating & immersive storyline

CHALLENGE: Decision making,witch fight

DISCOVERY: rare plants

FELLOWSHIP: bonding with the cat

PLAY TEST

PROCEDURE

▶ Pre-test: Prior knowledge

▶ Free-form play testing & Video taping

▶ Personal Interview

LESSONS

▶ Problems in pronouncing the scientific names.
▶ Common name easily recalled.
▶ Typing the scientific name favoured over using the mouse to kill the witch.
▶ Eagerness in healing the sick people.
▶ Immediate feedback on error in selecting the right genus or species.

FUTURE WORK

Scheduling & sequencing of the sick people to help in long term retention.

Developing an educational game architecture on the basis of social and cultural factors.

Developing an open frame-work for classroom use.

REFERENCES

Bloom's Revised Taxonomy
Cognitive Tutor Principles
Multimedia Principles
Le Blanc's Taxonomy
Gee's Principles