The Fibonacci Project

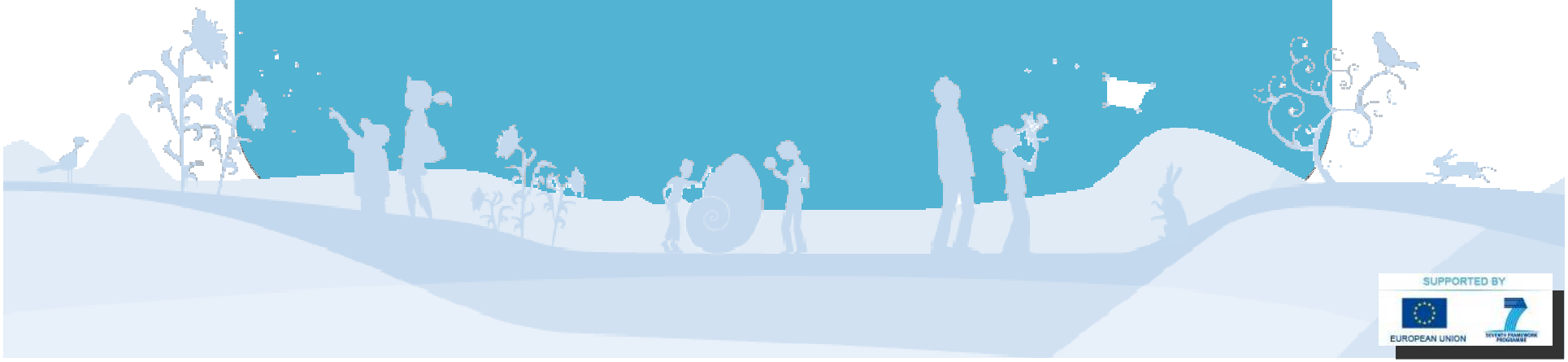
DISSEMINATING INQUIRY-BASED SCIENCE AND MATHEMATICS EDUCATION IN EUROPE

The Fibonacci Launch Conference

Bayreuth

21-22 of September 2010

The Fibonacci Project



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SEVENTH FRAMEWORK PROGRAMME

Context

Started in January 2010 for 38 months.

Call : Dissemination and use of inquiry-based teaching methods on a large scale in Europe

Science in Society programme (DG Research)

25 partners (21 countries)

European coordination : Ecole normale supérieure, Paris
Scientific coordination : Ecole normale supérieure, Paris – University of Bayreuth

Main objectives

- Designing , implementing and testing a process of dissemination in Europe of IBSME at primary and secondary schools**.**
- Creating a network of 12 References centres (RC) **based on successful Pollen seed cities and SINUS-TRANSFER** projects.
- Twinning each RC with 2 **Centres** (TC1 and TC2) considered as Reference Centres-in-progress.
- Elaborating a blueprint of a transfer methodology, valid for further Reference centres in Europe..

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3 pillars and 9 basic patterns

- Pillar 1 : Inquiry-based science and mathematics education in primary and secondary schools
- Pillar 2 : Local approach.
- Pillar 3 : Twinning strategy

9 Basic Patterns

1. Developing a problem-based culture
2. Working in a scientific manner
3. Learning from mistakes
4. Securing basic knowledge
5. Cumulative learning
6. Experiencing subject boundaries and interdisciplinary approaches
7. Promoting the participation of girls and boys
8. Promoting student cooperation
9. Autonomous learning

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What is a reference centre ?

- Recognition and expertise in inquiry-based education
- Systemic approach to implement IBSME in at least 25 classes
- Learning resources and material for schools
- Teacher training and teachers follow-up
- Based on a local network of key players
- Connections with universities regarding research in IBSME

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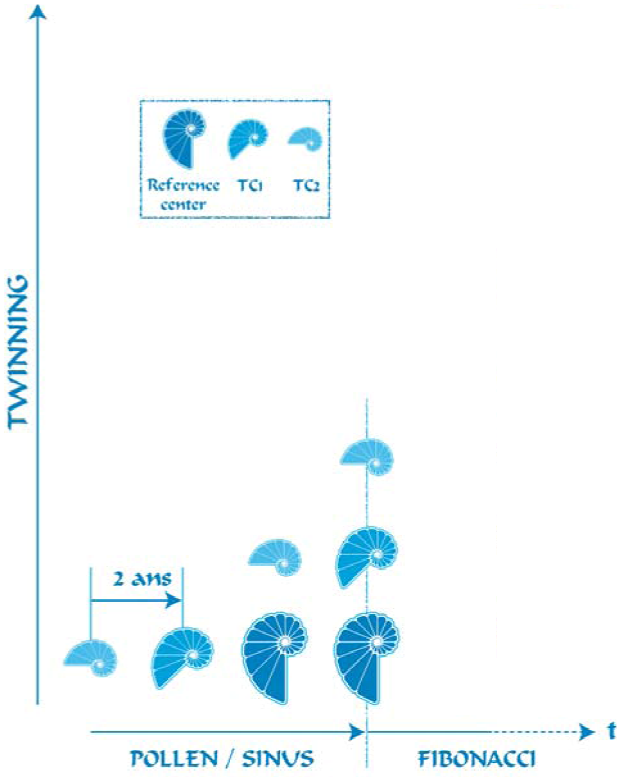
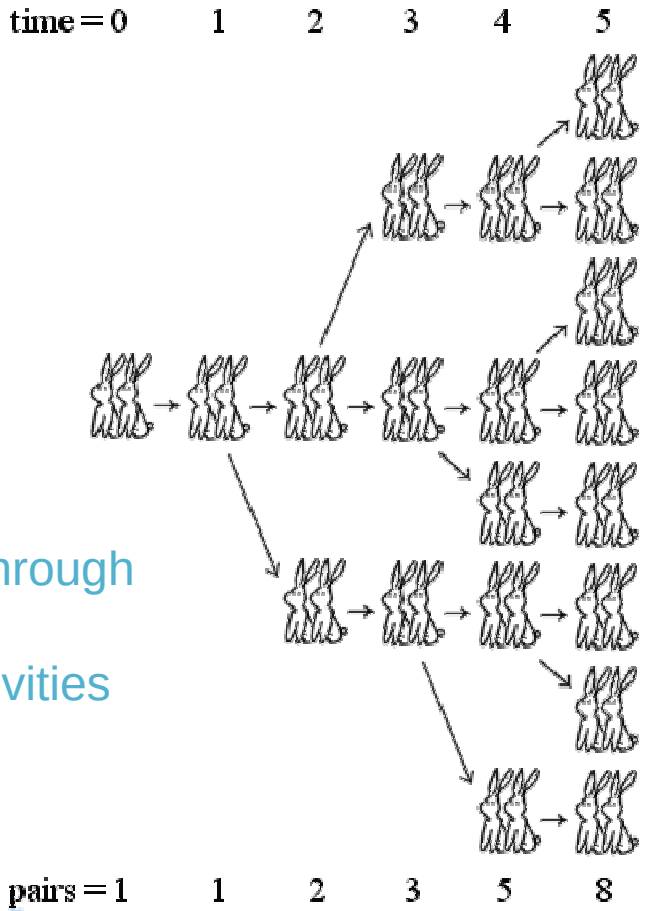
The Fibonacci sequence



2 years

Objectives
TC1 → RC
TC2 → TC1

Transfer done through twinning
and tutoring activities



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Fibonacci network

Transversal activities (1)

Common topics

- **4 to 6 partners** will jointly work together on f**ive major topics**:
  - **1-** Deepening specificities of inquiry in mathematics
  - **2-** Deepening specificities of inquiry in natural sciences
  - **3-** Implementing and expanding a Reference centre
  - **4-** Cross disciplinary approaches
  - **5-** Using the external environment of the school

- **September 2011 to March 2012 : Organisation of 5 European training sessions (60 participants each)**

- 2012 : 5 European guidelines related to the topics.

Transversal activities (2)

- Fibonacci Project First European Conference – Bayreuth, Germany (Sept 21–22, 2010)
- "Follow-up" Seminar in Denmark (March 2011)
- Scientific conference : Bridging the gap between scientific education research and practice - Leicester, UK (25-26 April 2012).
- "Conclusion" Seminar in Slovakia (Oct/Dec 2012)

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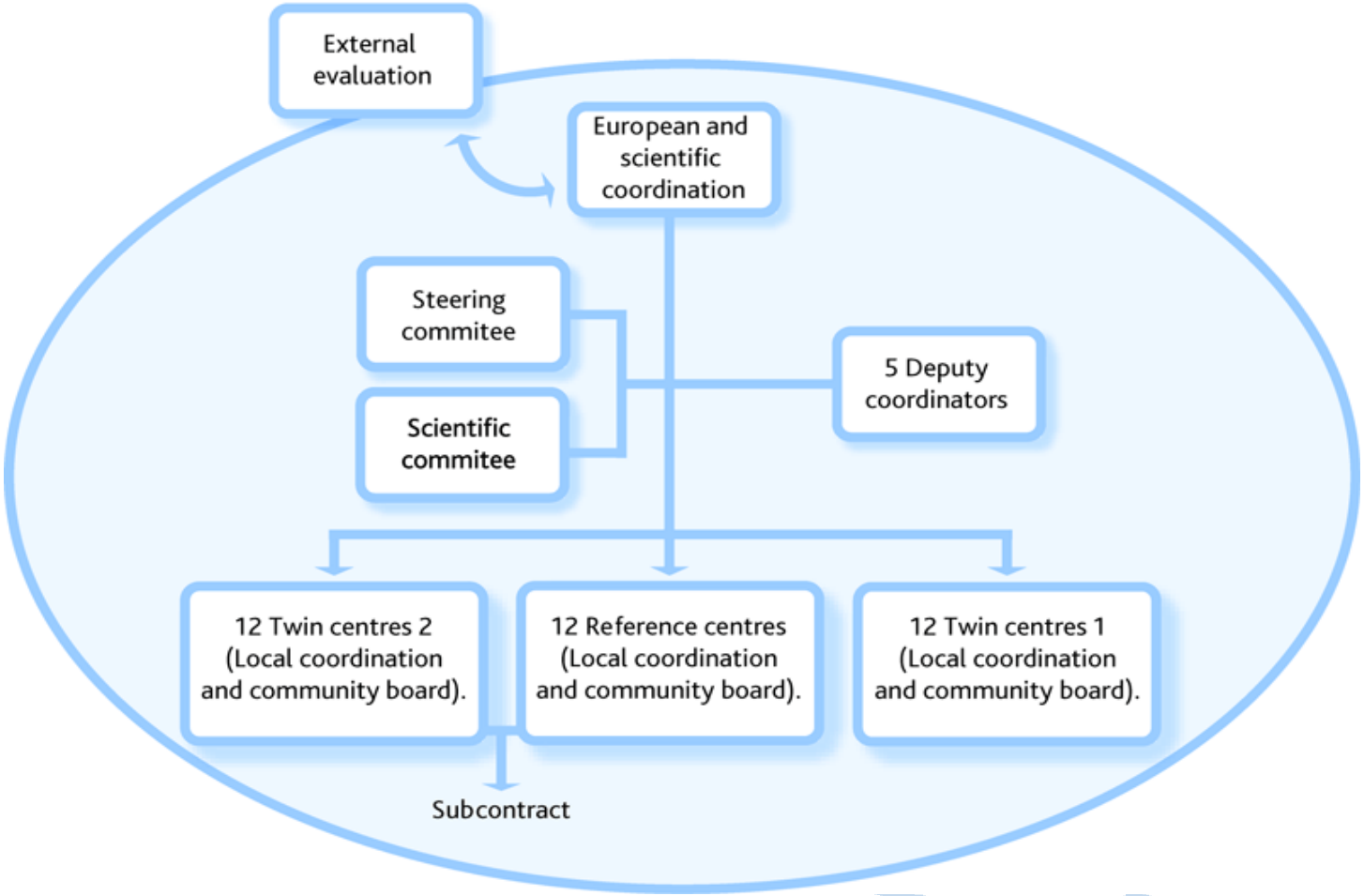
Transversal activities (3)

The greenwave project

- following the evolution of 4/5 species throughout Europe between February and June.
- measuring the temperature, rain fall and wind speed.
- uploading information and photographs onto the website.
- **To see a green wave moving up across Europe in springtime.**
- 25 teachers / country
- www.greenwave-europe.eu (from January 1st 2011)

Coordination



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Main Challenges

- put together science and mathematics education actors
- Explore the transition between primary and secondary schools
- Interest researchers to the Fibonacci activities
- Common frame vs. resources and strategies adapted to the different E.U educational system

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