School Diagnosis Chart

Group-oriented activities:

1   Classroom activities are going well.

2   My feelings are understood in the classroom.

3   The class activities are interesting.

Relationship with friends

4   My friend may worry when I am absent from school without notice.

5   My friend admits my goodness.

6   My friend understands me when I make a mistake.

Relationship with teachers

7   Teachers understand me when I make a mistake.

8   My teacher likes me.

9   My teacher accepts me warmly.

Help-seeking behaviors related to learning subject matter

10   I ask my friend when I could not understand something.

11   I ask my family when I could not understand something.

12   I ask teachers when I could not understand something.

Social class

13   After returning home from school and on my days off, I often play outside.

14   I talk with my family about what I have learned at school.

15   I read scientific articles and watch science TV programs.

16   I read newspapers and watch the TV news.

17   I use books or dictionaries when I study.

Attitude (Motivation) toward Math

18   Math is one of my   favorite subjects.

19   I can get good marks in math.

20   I can understand math classes.

21   Learning math is interesting.

22   I would like to tackle harder math problems.

23   I want to continue learning math even after becoming an adult.

Learning styles (Meta-cognitive ability): Math

24   When math class is difficult, I try to figure out the reason.

25   I know how to overcome my weak sides in math.

34   I can set up learning goal in math.

Learning Strategy (Memory-Oriented): Math

35   In math classes, Rote learning is important.

36   Repetition is important part in math learning.

37   I try to copy down everything that was written on the blackboard by teacher.

Learning Strategy (Elaboration-Oriented): Math

38   I try to organize my notebook to understand meaningfully what I learned in math classes.

39   When I learn a new idea in math, I try to make concrete image of it.

40   I try to understand topics not only by memorizing but also by inferring the meaning.

Learning Strategy (Organizaation-Oriented): Math

41   When I organize my math notes, I try to integrate the material.

42   I try to create a new conceptual category in which different topics could be grouped.

43   I try to connect what I learn in math classes to daily life.

Attitude (Motivation) toward Science

44   Science is one of my favorite subjects.

45   I can get a good marks in science.

46   I can understand science classes.

47   Learning science is interesting.

48   I would like to tackle harder science problems.

49   I want to continue learning science   even after becoming an adult.

Learning styles (Meta-cognitive ability): Science

50   When science class is difficult, I try to figure out the reason.

51   I know how to overcome my weak points in science.

52   I can set up a learning goal in science.

Learning Strategy (Memory-Oriented): Science

54   In science classes, Rote learning is important.

55   Repetition is an important part in science learning.

56   I try to copy down everything that was written on the blackboard by teacher.

Learning Strategy (Elaboration-Oriented): Science

57   I try to organize my notebook to understand meaningfully what I learned in science classes.

58   When I learn new idea in science, I try to make concrete image of that.

59   I try to understand topics not only by memorizing but also by inferring the meaning.

Learning Strategy (Organizaation-Oriented): Science

60   When I organize my science notes, I try to integrate the material.

61   I try to create a new conceptual category in which different topics could be grouped.

62   I try to connect what I learn in science classes to daily life.

Table. Standardized Cronbach's alpha

Group oriented	0.788
Friends	0.927
teachers	0.872
Help-seeking	0.495
Social class	0.664
Motivation (Math)	0.901
Motivation (SCI)	0.904
Meta-cognitive (Math)	0.827
Meta-cognitive (SCI)	0.812
MOLS (Math)	0.510
MOLS (SCI)	0.559
EOLS (Math)	0.793
EOLS (SCI)	0.759
OOLS (Math)	0.682
OOLS (SCI)	0.735

The questionnaire consisted of study-subject

- independent scales (5) and subject-dependent scales

(Math & Science)(5)