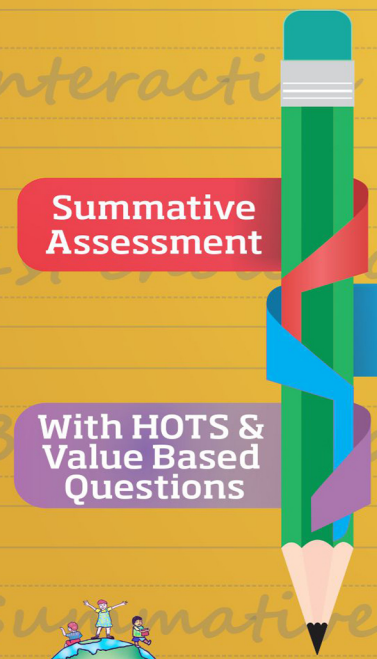
OSWAAL CBSE CCE

Class 9

For Term - 1 Examination

Pullout Worksheets

SCIENCE



- Strictly as per the latest CBSE Curriculum
- Chapter-wise/Topicwise Pullout Worksheets with ample space for writing answers
- Interactive Activities for Formative Assessment
- Questions from all the sets of CBSE Term-1 Summative Examinations

Solution can be downloaded from www.oswaalbooks.com

OSWAAL

CBSE Continuous and Comprehensive Evaluation CCE

PULLOUT Worksheets

Term 1 (April to September)

Science

Class 9

Solutions can be downloaded from our Website
www.OswaalBooks.com

OSWAAL BOOKS

"Oswaal House" 1/11, Sahitya Kunj, M.G. Road, AGRA-282002
Ph.: 0562-2857671, 2527781, **Fax :** 0562-2854582, 2527784
email : contact@oswaalbooks.com, **website :** www.OswaalBooks.com

Our Distributors

	ANDAMAN & NICOBAR
PORT BLAIR	Mitali Enterprises, (03192) 230749
	Kumar General Store, 9932082455
	ANDHRA PRADESH
GUNTOOR	Y. Renuka Devi, (0863) 2252308
HYDERABAD	Himalaya Book World, (040) 24732057, 66822350
	Unique Book World, (040) 40061423
	Shri Balaji Book Depot, (040) 27613300
	UBS Publisher & Dist., 9951078309
VIJAYAWADA	Sri Kanka Durga Book Stall, 09849144007
VISHAKHAPATNAM	JBD Educational, (0891) 6666062, 6666068
	Sri Rajeshwari Book Link, (891) 6661718
	ASSAM
GUWAHATI	Book Emporium, 9864057226
	UBS Publisher, 9401154448
	BIHAR
BHAGALPUR	Sanjay Book Store, (0641) 3202714, 2424830
PATNA	Gyan Ganga, (0612) 2268394, 2263011
	Nova Publisher & Distributors, (0612) 2666404
	UBS Publisher, 9835210136
	Shri Durga Pustak Mandir, (0612) 2301704
	Vikas Book Depot, (0612) 2304753
	Sharda Pustak Bhandar, (0612) 2300600
	Bokaro Student Friends, 09334259293
MUNGER	New Aman Book & Stationers, (06344) 220757
MUZAFFARPUR	Pustak Bhandar, 9097046555
	CHATTISGARH
DURG	Bhagwati Bhawani Book Depot, (0788) 2327620
RAIPUR	Shri Ramdev Traders, (0771) 2533465
	DELHI
DELHI	Mittal Books, (011) 23288887
	UBS Publisher, (011) 23273601
	R.D. Chawla & Sons, (011) 23282360, 23282361
	GOA
GOA	Golden Heart Emporium, (0832) 2725208, 3257383
	GUJARAT
AHMEDABAD	Tushar Book, (079)26578741, 26587103
	Agrasen Book & Stationery, (079) 27486239
	Abhyas Book, (079) 26766366
	Uppal Brothers, (079) 30421199
BALLABH VIDYANAGAR	Ajay Book Store, (02692) 238237
NAVSARI	College Store, (02637) 258642
VAPI	Vinay General Store, 9925817463
SURAT	Shopping Point, (0261) 2230097
	HARYANA
GURGAON	Adlakha Stationery, (0124) 2306991
	JHARKHAND
RANCHI	Gyan Ganga Ltd., (0651) 2563570
	Bokaro Student Friends, (0651) 221244
DHANBAD	Bokaro Student Friends, (0362) 2302493
BOKARO	Bokaro Student Friends, (06542) 234706
	KARNATAKA
BENGALURU	Balaji Book Centre (Mahaveer Jain) (080) 23331259
	Vasanta Book House, (080)22216342
	Madhu Book House, 9845568922
	Maruti Book Centre, (080) 40124558
	Sri Sai Ram Book House, (080) 22111243
	Sri Balaji Books & Stationers, (080) 22117659
	Sapna Book House – (Gandhinagar, (080) 40114455); (Sadashivnagar, (080)41236271); (Jayanagar, (080) 49066700);
	(Koramangala, (080) 40839999); (Residency Road, (080) 49166999); (Indiranagar, (080) 40455999); (Bannerghatta Road, (080) 42566299); (Nagavara, (080) 67294151);
	UBS Publisher & Dist., 9341621469
BELLARY	Pragati Book Stall, (08392) 272727
	Chaitanya Agency and Books, 8277477778
DAVANGERE	Laxmi Agencies, (08192) 231271
HUBLI	Renuka Book Depot, (0836) 4257624
	Sapna Book House, (0836) 4249999
MANGALORE	School Book Co., (0824) 2496938, 4281777
	Sapna Book House, (0824) 4232800
MYSORE	Sapna Book House, (0821) 4004499
	KERALA
CALICUT	Aman Book Stall, (0495) 3048187, 2721282
ERNAKULAM	H & C Store, (0484) 2377235
	Orient Book House, (0484) 2370431
	Academic Book House, (0484) 2376613
	Surya Book House, (0484) 2363721
	UBS Publisher & Dist., (0484) 2353901
KOTTAYAM	H & C Store, (0481) 2304351
	BOOK Centre, (0481) 2566992
KOZHIKODE	T.B.S. Publishers, (0495) 2721025, 2720085
THRISSUR	Giftalia Book Bhawan, (0487) 2442290
TRIVANDRUM	Acedemic Book House, (0471) 2333349
	MADHYA PRADESH
GWALIOR	Krishna Sons, (0751) 2320431
INDORE	Arun Prakashan, (0731) 2454372, 2459448, 3244544
	Akruti Publishing House, (0731) 2456024, 25
	Student Book Depot, (0731) 2535892
	S.P. & Sons, (0731) 2452680
	Akshar Sansar Publisher & Dist., (0731) 2453161
BHOPAL	UBS Publisher & Dist., 97547535412
JABALPUR	Sangam General Store, (0761) 2313592, 6538467
	Akash Book Distributor, (0761) 4063099
KATNI	Agrasen Stationers, (07622) 403377
REWA	Siddharth Enterprises, (07662) 404019
UJJAIN	Sri Nath Book Depot, (0734) 2556903, 2556902
	MAHARASHTRA
AHMEDNAGAR	Heera Stationers, (0241) 2418774
AKOLA	Book Emporium, (022) 2436460
	Rathi Paper Traders, (0724) 2452679, 2452979
AURANGABAD	Maya Book Centre, (0240) 2360150
BHUSAWAL	Anil Book Depot, (02582) 225412
CHANDRAPUR	Novelty Book Depot, (07172) 277418
JALGAON	Sharma Book Depot, (0257) 6958794
	Vidyadhan Book House, (0257) 2225548
KOLHAPUR	Jai Book Co., (0231) 2651008
MUMBAI	Shivam Book & Stationers, (022) 28381014, 28236000
	Reshma Agency, (022) 23070853
NAVI MUMBAI	Krishna Book Store, (022) 27744962, 32980838
NAGPUR	Novelty Book Depot, (0712) 2534884
	Vijay Book Depot, (0712) 2534217, 2520496
	Shree Balaji Agency, (0712) 2452361
	UBS Publisher & Dist., (0712) 6437909, 2736010
	Laxmi Pustakalya, (0712) 2720379
NANDED	India Book Agencies, 9890489460
	Vijay Book Centre, 9872994436
PUNE	Sai Shubham, (020) 69498635, 9975687687
	UBS Publisher & Dist., 9860288838
SOLAPUR	Mahavir General Store, (0217) 2723405
WARDHA	Unique Traders, (07152) 243617, 9960644752
YAVATMAL	Dilip Book Agencies, (07232) 245450
	ODISHA
BHUBANESWAR	Sagar Book Store, (0674) 2516040, 2506040
	Pragnya Book Store, (0674) 2405757
	UBS Publishers & Dist., (0674) 2314446
	PUNJAB
BARNALA	Bhaian Di Hatti, (01679) 2321717
BHATINDA	Janta Book Depot, (0164) 2253993
	Krishna Book Depot, (0614) 2237611
LUDHIANA	Chhabra Book Depot, (0161) 2405427
	Amit Book Depot, (0161) 2727038
	Bhatia Book Centre, (0161) 2747713
	RAJASTHAN
BHARATPUR	Sunil Book Centre, (05644) 233777, 220650
BHILWARA	Nakoda Book Depot, (01482) 239653
JAIPUR	Goyal Book Distributors, (0141) 2571673
	SIKKIM
GANGTOK	Kwality Store, (03592) 202992
	TAMIL NADU
COIMBATORE	UBS Publisher & Dist., (0422) 2499914
	Sapna Book House, (0422) 4629999
CHENNAI	Indian Book House, (044) 24327784
	Ruby Books, (044) 26425958
	UBS Publisher & Dist., (044) 2374622
TRICHY	Rasi Publication, (0431) 2703692
	TRIPURA
AGARTALA	Book Corner, (0381) 2301945
	UTTAR PRADESH
AGRA	Ajay Book, (0562) 2254621
	Om Pustak Mandir, (0562) 2464014, 3059218
ALIGARH	Shaligram & Sons, (0571) 2421887
ALLAHABAD	Mehrotra Book Depot, (0532) 2400129, 2266128
AZAMGARH	Sasta Sahitya Sadan, (05462) 224421
BILASPUR	Raj Agencies, 9412150750
BALIA	Saraswati Shishu, (05498) 221042
	Vidya Kendra, 9415281234
LUCKNOW	VBS Publication, (0522) 4025144
	Rama Book Depot (Retail), (0522) 4080133
MEERUT	Mahi Book Palace, (0121) 2541791, 2649644
	Ideal Book Depot, (0121) 2660648
NOIDA	UBS Publisher & Dist., (0120) 4205516
VARANASI	Bokaro Student Friends, (0542) 2401250
	Gupta Books, (0542) 2413017
	WEST BENGAL
KOLKATA	Oriental Publishers, (033) 22191591, 22198367
	Saha Book House, (033) 22193671
	Eureka Book Emporium, (033) 25934001
	Katha–O–Kahani Pvt. Ltd., 22419071, 22196313
	Every Book, (033) 22418590
SILIGURI	Agarwal Book House, (0353) 2535274
	Novelty Books, (0353) 2525445

For more Book-shops visit www.OswaalBooks.com

© Publisher
Oswaal Books

Disclaimer :
Oswaal Books has exercised due care and caution in collecting the data before publishing this book. Inspite of this if any omission, inaccuracy or printing error occurs with regards to the data contained in this book, Oswaal Books will not be held responsible or liable. Oswaal Books will be grateful if you could point out any such error or your suggestion which will be of great help for other readers.

CONTENTS

Unit I : Matter : Its Nature and Behaviour

1. Matter in Our Surroundings

Summative Assessment
- Worksheets 1 - 8 — 9 - 24

Practical Based Questions
- Worksheet 9 — 25 - 26

Formative Assessment
- Worksheet 10 — 27 - 28

2. Is Matter Around Us Pure ?

Summative Assessment
- Worksheets 11 - 18 — 29 - 44

Practical Based Questions
- Worksheet 19 — 45 - 46

Formative Assessment
- Worksheet 20 — 47 - 48

Unit II : Organization in the Living World

3. Cell-A Basic Unit of Life

Summative Assessment
- Worksheets 21 - 28 — 49 - 64

Practical Based Questions
- Worksheet 29 — 65 - 66

Formative Assessment
- Worksheet 30 — 67 - 68

4. Tissues, Organs, Organ System, Organism

Summative Assessment
- Worksheet 31 - 38 — 69 - 84

Practical Based Questions
- Worksheet 39 — 85 - 86

Formative Assessment
- Worksheet 40 — 87 - 88

Unit III : Motion, Force and Work

5. Motion

Summative Assessment
- Worksheets 41 - 49 — 89 - 106

Formative Assessment
- Worksheet 50 — 107 - 108

6. Force and Laws of Motion

Summative Assessment
- Worksheets 51 - 59 — 109 - 126

Practical Based Questions
- Worksheet 60 — 127 - 128

Formative Assessment
- Worksheet 61 — 129 - 130

7. Gravitation

Summative Assessment
- Worksheets 62 - 69 — 131 - 146

Formative Assessment
- Worksheet 70 — 147 - 148

Unit V : Food; Food Production

8. Improvements in Food Resources

Summative Assessment
- Worksheets 71 - 78 — 149 - 164

Practical Based Questions
- Worksheet 79 — 165 - 166

Formative Assessment
- Worksheet 80 — 167 - 168

PREFACE

Year after year CBSE has been introducing changes in the curriculum of various classes. We, at Oswaal Books, closely follow every change made by the Board and endeavor to equip every student with the latest study material to prepare for the Term Examinations.

The latest offering from us are these Worksheets. These aim at providing comprehensive practice material for every chapter to ensure that every concept is revised in totality. These are prepared by experienced teachers who have translated their expertise into making these worksheets a wholesome study package. Every worksheet contains a mix of questions, for which the maximum marks and time are mentioned to create an exam oriented study material.

Our worksheets strictly follow the CBSE Syllabus and include the following:

- Chapter-wise pullout worksheets with space for writing answers
- Wide variety of questions based on Summative & Formative Assessment
- Term wise segregation of Chapter as per CBSE Syllabus
- Value Based Questions & Questions based on HOTS.
- Previous Year Questions

We feel happy to add these to our existing portfolio of Question Banks and Sample Question Papers. We hope that with our **Worksheets,** every student will discover a more interactive way of studying and thereby excelling in his examination Questions. We welcome any suggestions that come our way for improvisation.

We wish you good luck for the forthcoming academic year!!

–Publisher

Latest Syllabus for Academic Year 2016-17

Science Class - IX

For Term I (April - September)

(Code No. 086 / 090)

Course Structure

Unit No.	Unit	Marks
I	Matter - Its Nature and Behaviour	29
II	Organization in the Living World	18
III	Motion, Force and Work	30
V	Food; Food Production	13
	Total	**90**

The subject of Science plays an important role in developing well-defined abilities in cognitive, affective and psychomotor domains in children. It augments the spirit of enquiry, creativity, objectivity and aesthetic sensibility.

Whereas the upper primary stage demands that a number of opportunities should be provided to the students to engage them with the processes of Science like observing, recording observations, drawing, tabulation, plotting graphs, etc., the secondary stage expects abstraction and quantitative reasoning to occupy a more central place in the teaching and learning of Science. Thus, the idea of atoms and molecules being the building blocks of matter makes its appearance, as does Newton's law of gravitation.

The present syllabus has been designed around six broad themes viz. Food, Materials, The World of The Living, How Things Work, Moving Things, People and Ideas, Natural Phenomenon and Natural Resources. Special care has been taken to avoid temptation of adding too many concepts than can be comfortably learnt in the given time frame. No attempt has been made to be comprehensive.

At this stage, while science is still a common subject, the disciplines of Physics, Chemistry and Biology begin to emerge. The students should be exposed to experiences as well as modes of reasoning that are typical of the subject.

General Instructions:

1. The units specified for each term shall be assessed through both Formative and Summative Assessments.
2. In each term, there will be two Formative Assessments each carrying 10% weightage.
3. The Summative Assessment in each term will carry 30% weightage.
4. Hands on Practical examination will be conducted through Formative Assessment in every term with 20% weightage of total term marks.
5. Assessment of Practical Skills through Practical Based Questions (PBQ) will carry 15 marks in every term end Summative Assessment.

Theme: Materials **(22 Periods)**

Unit I: Matter-Its Nature and Behaviour

Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state-melting (absorption of heat), freezing, evaporation (cooling by evaporation), condensation, sublimation.

Nature of matter :

Elements, compounds and mixtures. Heterogenous and homogenous mixtures, colloids and suspensions.

Theme: The World of the Living (22 Periods)

Unit II: Organization in the Living World

Cell - Basic Unit of life : Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organelles and cell inclusions; chloroplast, mitochondria, vacuoles, endoplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number.

Tissues, Organs, Organ System, Organism:
Structure and functions of animal and plant tissues (only four types of tissues in animals; Meristematic and Permanent tissues in plants).

Theme: Moving Things, People and Ideas (36 Periods)

Unit III: Motion, Force and Work

Motion: Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance-time and velocity-time graphs for uniform motion and uniformly accelerated motion, derivation of equations of motion by graphical method; elementary idea of uniform circular motion.

Force and Newton's laws : Force and Motion, Newton's Laws of Motion, Inertia of a body, Inertia and mass, Momentum, Force and Acceleration. Elementary idea of conservation of Momentum, Action and Reaction forces.

Gravitation: Gravitation; Universal Law of Gravitation, Force of Gravitation of the earth (gravity), Acceleration due to Gravity; Mass and Weight; Free fall.

Theme: Food (10 Periods)

Unit V: Food Production

Plant and animal breeding and selection for quality improvement and management; Use of fertilizers and manures; Protection from pests and diseases; Organic farming.

PRACTICALS – FIRST TERM

Practicals should be conducted alongside the concepts taught in theory classes.

(LIST OF EXPERIMENTS)

1. To test (a) the presence of starch in the given food sample, (b) the presence of the adulterant metanil yellow in dal.
2. To prepare:
   a) a true solution of common salt, sugar and alum
   b) a suspension of soil, chalk powder and fine sand in water
   c) a colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of
      - transparency
      - filtration criterion
      - stability
3. To prepare
   a) a mixture
   b) a compound

   using iron filings and sulphur powder and distinguish between these on the basis of:
   (i) appearance, i.e., homogeneity and heterogeneity
   (ii) behaviour towards a magnet
   (iii) behaviour towards carbon disulphide as a solvent
   (iv) effect of heat
4. To carry out the following reactions and classify them as physical or chemical changes :
   a) Iron with copper sulphate solution in water
   b) Burning of magnesium in air
   c) Zinc with dilute sulphuric acid
   d) Heating of copper sulphate
   e) Sodium sulphate with barium chloride in the form of their solutions in water
5. To prepare stained temporary mounts of (a) onion peel and (b) human cheek cells and to record observations and draw their labeled diagrams.
6. To identify parenchyma and sclerenchyma tissues in plants, striped muscle fibers and nerve cells in animals, from prepared slides and to draw their labeled diagrams.
7. To separate the components of a mixture of sand, common salt and ammonium chloride (or camphor) by sublimation.
8. To determine the melting point of ice and the boiling point of water.
9. To establish relationship between weight of a rectangular wooden block lying on a horizontal table and the minimum force required to just move it using a spring balance.
10. To determine the mass percentage of water imbibed by raisins.

Question Paper Design For SCIENCE

TIME : 3 Hours **CLASS IX (2016-17)** Max. Marks : 90

S. No.	Typology of Questions	Very Short Answer (VSA) (1 Mark)	Short Answer- I (SA)-I (2 Marks)	Short Answer-II (SA)-II (3 Marks)	Long Answer (LA) (5 Marks)	Total Marks	% Weightage
1	**Remembering - (Knowledge based** Simple recall questions, to know specific facts, terms, concepts, principles, or theories; Identify, define, or recite, information)	3	-	1	1	11	15%
2	**Understanding- (Comprehension** -to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	-	1	4	1	19	25%
3	**Application** (Use abstract information in concrete situation, to apply knowledge to new situations; Use given content to interpret a situation, provide an example, or solve a problem)	-	-	4	1	17	23%
4	**High Order Thinking Skills (Analysis & Synthesis -** Classify, compare, contrast, or differentiate between different pieces of information; Organize and/or integrate unique pieces of information from a variety of sources)	-	2	-	1	9	12%
5	**Inferential and Evaluative** (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	-	-	2+1*	2	19	25%
	Total (Theory Based Questions)	**3x1=3**	**3x2=6**	**12x3=36**	**6x5=30**	**75(24)**	**100%**
	Practical Based Questions (PBQs)	**9x1=9**	**3x2=6**	**-**	**-**	**15(12)**	
	Total	**12x1=12**	**6x2=12**	**12x3=36**	**6x5=30**	**90(36)**	

CHAPTER

1 MATTER IN OUR SURROUNDINGS

WORKSHEET-1

Name	Class.....	Roll No.....	Time 25 Min.	Max. Marks 20	Marks Obtained

TOPIC-1
Matter, Solid, Liquid, Gas; Characteristics of Solid, Liquid and Gas

Q. 1. Why do liquids have mostly lower density than soilds ? **(Board Term I, 2013, 7ZTHA8G) (1)**

Ans. .....

.....

Q. 2. What happens when you open a bottle of perfume ? **(Board Term I, 2012 Set-016) (1)**

Ans. .....

.....

Q. 3. Arrange the following substances in the increasing order of force of attraction between their particles : Oxygen, salt, milk. **(Board Term I, 2012 Set-015) (1)**

Ans. .....

.....

Q. 4. Compare the rate of diffusion of liquids and solids with reason. **(Board Term I, 2014, Set-LFS3I7K) (2)**

Ans. .....

.....

.....

.....

Q. 5. Explain :

(a) Sponge though compressible is a solid.

(b) Rubber band though stretchable is a solid.

(Board Term I, 2015, Set-LOV7LN7; 2014, Set-MNM9GZH) (2)

Ans. .....

.....

.....

.....

.....

.....

Q. 6. Among solids, liquids and gases, which one has :

(a) maximum force of attraction between the particles.

(b) minimum spaces in between particles. **(Board Term I, 2015, 3GS246G) (2)**

Ans. .....

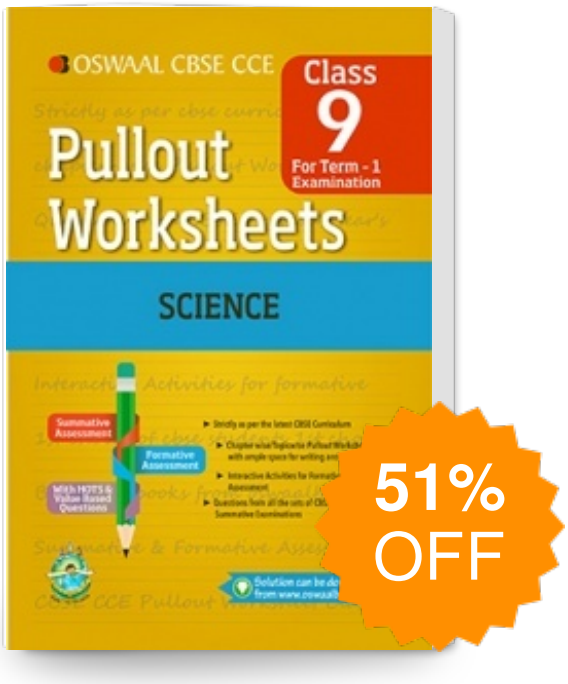
.....

.....

.....

SUMMATIVE-ASSESSMENT

Oswaal CBSE CCE Pullout Worksheets For Class 9 Science Term-1 (April To September)



Publisher : Oswaal Books ISBN : 9789351278375 Author : Panel Of Experts

Type the URL : http://www.kopykitab.com/product/7927

Get this eBook